NURSES' PERCEPTIONS OF NURSE-PHYSICIAN COLLABORATION IN THE INTENSIVE CARE UNITS OF A PUBLIC SECTOR HOSPITAL IN JOHANNESBURG

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DECLARATION

I, Feggie Bodole, declare that this research report is my own work. It is being submitted for the degree of Master of Science (in Nursing) in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other university.

Signature……..

……day of …….2009

Protocol Number **M081012**

DEDICATION

I dedicate this work to my loving husband Peter and all the children. Thank you for your wonderful love, encouragement and support throughout the course.

To the almighty God be all the glory and honour.

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I wish to sincerely express my gratitude to my supervisors, Dr. Gayle Langley and Shelley Schmollgruber, for their untiring support, guidance and teaching. You were indeed my pillars. Thank you.

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May God bless you all.

ABSTRACT

Nurses working with critically ill patients in intensive care units (ICUs) have a unique role to play in health care. They spend 24 hours with patients and come into contact with all the disciplines which come to review these patients. Nurses therefore need to effectively collaborate with the multidisciplinary teams, especially physicians, in order to meet patients' needs and maximise patient care outcomes. The purpose of this study was to identify and describe nurses' perceptions towards nurse-physician collaboration in the intensive care units. A non experimental descriptive study design was utilised in this study. Data were collected using a questionnaire developed from the Jefferson Scale of Attitude toward Physician-Nurse Collaboration with additional two open-ended questions to cover the rest of the study objectives. Data were analysed using descriptive and inferential statistics as well as content analysis.

Results showed that nurses working in Intensive Care units (ICUs) had positive attitude towards nurse-physician collaboration regardless of gender, years of working in the ICUs and whether registered intensive critical care nurse or not. The findings also showed that nurses perceive that the process of nurse-physician collaboration in Intensive Care Units provokes a number of challenges, such as superior-subordinate relationships which exist between nurses and physicians, workload and overlapping responsibilities hence, nurses feel inferior, undermined, mostly overwork and become frustrated. However, nurses suggested that promoting team-work; a focus on patient-centered care and staff motivation would assist in creating effective collaborative environment.

Keywords: perception, nurse-physician collaboration, team, collaborative environment.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Caring for critically ill patients in Intensive Care Units (ICUs) is complicated. It requires the establishment and maintenance of a collaborative multidisciplinary team working environment. Collaboration is viewed as a means of collectively achieving results, which an individual discipline would be incapable of accomplishing working alone, and it requires recognising and appreciating the roles of each discipline to devise a common purpose (Marquis & Huston, 1998 & Yildirim, Ates, Akinci, et al., 2005). The complex needs of critically ill patients have increased the demand for nurse-physician collaboration. Nurse-physician collaboration is therefore the process whereby nurses and physicians would work together in the delivery of quality care through a balanced relationship characterised by mutual trust and respect in order to meet the needs for collaborative high-quality patient care.

Caring for critically ill patients and their families in the ICU setting involves various disciplines such as nursing, medicine and others to form a caring team. A team which is a group of individuals needs to collectively collaborate so that they can achieve optimum patient care outcome with complementary skills (Bucher & Melander, 1999). Effective collaboration thrives on a matured relationship in which health professionals come to respect and value each other's perspectives. This brings job satisfaction as a result of

ongoing consultation and thoughtful dialogue on key initiatives towards patients' wellbeing (Chaboyer & Patterson, 2001; McCauley & Irwin, 2006).

Positive effects of collaboration in the ICUs are well documented in the literature. They include improved patient care outcome evidenced by decreased patient length of stay in the units, reduced hospital charges on the patients and few readmissions (Chaboyer & Patterson, 2001; Urden, Stancy & Lough, 2006; Fewster-Thuente & Velsor-Friedrich, 2008). This was also reported by Knaus, Draper, Wagner, et al., (1986) who found that in hospitals where collaboration was being practised, there was 41% lower mortality than the predicted number of deaths in one ICU; whereas in hospitals where there was little or no collaboration it exceeded the predicted mortality by as much as 58%.

However, literature has also shown that effective collaboration struggles to mature amongst the various disciplines who work in the ICUs due to a number of constraints. These include communication problems, lack of team decision making, lack of conflict management skills and lack of role clarification, among others (Crofts, 2006; Sterchi, 2007; Henneman, 2007; McKay & Crippen, 2008).

In a study conducted by Stein-Parbury & Liaschenko (2007) in Australia and United States of America, it was found that there was increased anger, withdrawal and frustration often observed among ICU multidisciplinary teams, especially between nurses and physicians. This reflected a lack of teamwork, collegiality, respect and trust, as well as lack of recognition and shared responsibility among those health professionals, which made collaboration difficult. Frustration of nurses resulted in resignation and worsened

the already existing shortage of nurses. The autonomy of nurses was also decreased in an area where physicians were not always present and yet nurses needed to make decisions in order to maintain patients' stability.

Nurses have tended to show a more positive attitude toward collaboration and have been willing to be involved in teamwork but have felt frustrated whenever it failed (Sterchi (2007). Hill (2003) added that nurses withdrew from contributing during ward rounds because it was felt that their contributions were being undermined. Similarly, Vazirani, Hays, Shapiro, et al., (2005) affirm that staff nurses could only interact well with specialist nurse practitioners but not with physicians. This resulted in staff nurses not participating in ward rounds since they felt that they were not welcome.

On the other hand, several prerequisites for establishing and sustaining true collaboration in critical care settings have been recommended. These included: open communication, respect between team members, non-hierarchical working environments, developing relationships and learning how to interact effectively with a clear role clarification (Ulrich, Lavandero, Hart, et al., 2006; Stein-Parbury & Liaschenko, 2007; McKay & Crippen, 2008; Fewster-Thuente & Velsor-Friedrich, 2008).

1.2 PROBLEM STATEMENT

Collaboration in Intensive Care Units is important since it increases both the chances of patients' safety as well as job satisfaction amongst health care providers, especially nurses and physicians. Despite many positive effects of collaboration in the ICUs which

include decreased patient length of stay in the units, reduced hospital charges on the patients, few readmissions and low mortality rates, nurse-physician collaboration remains a challenge in the intensive care units. Nurse-physician collaboration seems to be stressful because mostly nurses do not feel free to interact and communicate with physicians with respect to discussing patient needs, especially during ward rounds and planning patient care. This carries the risk of not creating a safe, healthy and healing collaborative environment in these critical and complex care settings. As a result, patients' care outcomes may be affected.

To date, no studies have been conducted in Intensive Care settings in South Africa to explore nurses' own perceptions of nurse-physician collaboration, specific perceived challenges or constraints and suggested measures which could assist to establish and maintain effective collaboration. It has also been noted that almost all the studies on nurse-physician collaboration have been conducted overseas amongst western cultures. This study, therefore, seeks to identify and describe nurses' perception of nurse-physician collaboration and elicit suggested measures regarding maintenance of effective nurse-physician collaboration in Intensive Care Units in South Africa. The researcher attempted to answer the following questions:

- How do nurses perceive the reality of nurse-physician collaboration in the Intensive Care Units?
- What do nurses perceive as constraints to effective nurse-physician collaboration in the Intensive Care Units?
- What measures do nurses feel could enhance effective collaboration between nurses and physicians in the Intensive Care Units?

1.3 PURPOSE OF THE STUDY

The purpose of this study was to identify and describe nurses' perceptions regarding nurse-physician collaboration in the Intensive Care Units in a public sector tertiary hospital in Johannesburg.

1.4 RESEARCH OBJECTIVES

The objectives for the study were to:

- Identify and describe nurses' perception of nurse-physician collaboration in the Intensive Care Units;
- Elicit the constraints that influence effective nurse-physician collaboration in the Intensive Care Units;
- Identify suggested measures for enhancing effective nurse-physician collaboration in the Intensive Care Units.

1.5 SIGNIFICANCE OF THE STUDY

It is believed that the results of the study may help to identify and describe nurses' perceptions and recommendations regarding the establishment and maintenance of nurse-physician collaboration in the intensive care units. It is hoped that the results, when published, would help to improve collaboration between nurses and physicians as well as amongst nurses themselves and other allied team members who work in critical care settings. In addition, the results would help equip nurses with professional

communication skills and become autonomous so that critically ill patients are cared for in safe collaborative environments. Patient care outcomes would be maximised if nurses are able to advocate for them. Effective nurse-physician collaboration would also apply to any health care setting.

1.6 PARADIGMATIC PERSPECTIVES

Paradigm is defined as those aspects of a discipline that are shared by its scientific community (Meleis, 2005). This study is based on the following assumptions:

1.6.1 Meta-theoretical Assumptions

Meta-theoretical assumptions are beliefs that something is true although there is no proof (Botes, 1993).

- Therefore the researcher accepts metatheoretical assumptions based on the American Association of Critical-Care Nurses (AACN)' synergy model for patient-care, which was originated in 1992. The model is based on the reasoning that the needs of the patient and family drive the competencies required by the nurse in a critical care setting through a commitment to interdisciplinary collaboration (Alspach, 2006). Synergy is a phenomenon that occurs when individuals work together in mutually enhancing ways towards a common goal and thus achieve collaboration.
- The framework of practice includes a commitment to interdisciplinary collaboration.

- The critical care nurse works with an interdisciplinary team in order to create a humane, caring and healing environment.
- Improved and effective communication among care givers such as “hand over” communication is one of the adopted patient safety goals set by the Joint Commission on Accreditation of Healthcare Organisations (JCAHO, 2006).
- The model focuses on the competences needed by the critical care nurse in order to meet the patient’s needs so as to achieve maximum outcomes of the patent.
- Collaboration therefore is amongst one of the nurses’ competencies which promote each person’s contributions towards achieving optimal and realistic patient and family goals.

The central theoretical statement of this study is that critical care nurse is a constant in the critical care environment and works to develop an organisational culture that supports collaboration. The extents to which care and treatment objectives are achieved reflect the nurse’s role as an integrator of care that requires a high degree of collaboration (Alspach, 2006). As such this study seeks to understand how nurses perceive the concept of collaboration with physicians.

The four main nursing discipline concepts are defined as follows:-

Person - a patient ha**s** biologic, psychologic, social and spiritual needs, which are experienced within the health and illness continuum. When a patient is critically ill, all these needs must be considered. Maximum patient outcomes are therefore achieved by two or more people working together to meet the patients’ needs. However, each

critically ill patient has unique needs which should be addressed so that she/he is able to cope and bounce back to healthy life after an injury or sickness.

Environment - critically ill patients require a humane, caring and healing environment. The critical care nurse is a constant in the critical care environment and works to develop an organisational culture that supports collaboration in order to achieve optimum patient outcome. The critical care environment focuses on the needs of the patients and their families which drive the competencies needed by the critical care health providers.

Health - health is a dynamic experience in the life of a human being. That implies continuous adjustment to the stressors in the internal and external environment. The critically ill patient is suddenly confronted with a life threatening condition and also the unfamiliar surroundings in the ICU. In order to gain health, the patient is required to continuously adjust to the stressors, such as the invasive and non-invasive diagnostic procedures, and treatments and finally have the will-power to live or not.

Nursing - critical care nursing is a combination of knowledge, critical thinking, skills, and experience and positive attitudes. The nursing competencies, such as collaboration and caring aspects needed are derived from the patient's needs. Nursing is a continuous process of human interaction between the nurse and client whereby each trusts the other in the situation, and through communication are jointly able to set goals, explore means and agree on the best means to achieve those goals. Similarly, in the ICU setting there is a 24 hour one-to-one critical care nursing, which implies a continuous process of intensive

interaction between the critical care nurse and the critically ill patient, with the former providing individualised quality care for the latter. The goal is to ensure that the needs of a critically ill patient are continuously met, thereby facilitating the achievement of maximum patient outcome in the midst of cost containment.

1.6.2 Definition of Terms for the Purpose of this Study

Collaboration - In this study collaboration is defined as a process whereby critical care nurses and doctors work together, discuss patients' problems, make joint decisions and share responsibilities built on trust and respect (Vazirani, et al., 2005). Shared planning responsibility, goal setting, cooperation and coordination are other critical attributes to collaboration.

Perception – is defined as an idea, a belief or an image that someone has as a result of how he/she sees or understands something (Wehmeier, Mclntosh, Turnbll, 2005). A relevant example is nurse-physician collaboration. In this study, nurses' understanding of collaboration and attitudes towards collaboration were measured using the "Jefferson Scale of Attitudes toward Nurse-Physician Collaboration.

Intensive Care Unit – is one of the critical care settings that is specially staffed, equipped and dedicated to the admission and treatment of critically ill patients so that they can be given specialised care and be closely monitored (Whiteley, Bodenham & Bellamy, 2001; Williams, Chaboyer, Alberto, et. al., 2007). For the purpose of this study, four level three Intensive Care Units were used, namely: Trauma, Cardiothoracic, Cardiac and Main/General ICUs. According to Oh (1997) a level three ICU is one that is located

in a major tertiary referral hospital and provides all aspects of intensive care required of its referral status. The unit receives support of complex investigations, imaging and consultations by specialists of all disciplines at all times. The unit is staffed by:

- Specialist Intensivists with Registrars;
- Critical Care Nurses;
- Allied Health Professionals (Physiotherapists, Pharmacists, Dieticians, and Social Workers);
- Clerical Staff.

Critical Care Nurse - refers to a registered nurse who has undergone specialised education and training with certification and is registered with the professional regulatory nursing body as a Critical Care Nurse. For the purpose of this study, all nurses working in the selected ICUs who provide critical care nursing were considered eligible and were invited to participate in the study whether they were registered and specialised as a critical care nurses or not. These nurses according to Oh (1997) and Brilli, Spevet, Branson, et al., (2001) are responsible for:

- Ensuring that all acutely ill patients receive optimal nursing care
- Assessing, collecting and integrating information and incorporating it into meaningful patient care as well as monitoring and evaluating patients' responses to the interventions
- Preventing complications, for example nosocomial infections
- Ensuring patients' comfort and providing family members with information and support

- Maintaining professional nursing practice standards by providing quality care, adherence to ethical considerations, collaboration with team members and careful resource utilisation.

Multi-disciplinary Team – is a group of people representing different disciplines working in a coordinated manner, aimed towards achieving the same goal (Brilli, et al., 2001). In this study, this is the multidisciplinary team of nurses and physicians working in the selected ICUs.

1.7 OVERVIEW OF RESEARCH METHODOLOGY

A non-experimental quantitative descriptive study design was utilised in this study. The setting was four adult ICUs at a level three tertiary public sector hospital in Johannesburg. The target population was all permanent nurses working in the four ICUs namely: Cardiothoracic, Trauma, Coronary and General (N=89). In consultation with statistician the total population was to be used as the sample because their numbers were considered as manageable. However, the total population was not used because some of the nurses were on annual and study leave and therefore a sample of 80 (n=80) was achieved.

The protocol was submitted to the Faculty of Health Sciences Post Graduate Committee for approval, and permission was granted. Ethical clearance to conduct the study was sought from the Human Ethics Research Committee (Medical) of the University of

Witwatersrand. The research was approved and an ethical clearance certificate number M081012 was issued.

Data were collected using an existing questionnaire, the Jefferson Scale of Attitude toward Physician-Nurse Collaboration, which has 15 items on a four-point Likert scale. Following the review of literature, the Jefferson scale was selected for this study because it is one of the instruments whose validity and reliability has been carefully reviewed that it can measure the concept of collaboration and has been recommended for use in further nurse-physician collaboration studies (Hojat, Nasca, Cohen, etal., 2001; Dougherty & Larson, 2005; Sterchi, 2007). However, the post graduate committee recommended the addition of two open-ended questions since it had noticed that the use of items from the Jefferson scale alone would not address second and third objectives of this study. After the pilot study, the researcher therefore, believed that the use of this instrument would achieve the purpose of this study. Data were analysed using descriptive and inferential statistics as well as categorical content analysis. Statistical assistance was sought from a statistician from the Medical Research Council (MRC).

A pilot study was carried out before the main study was conducted in one of the adult ICUs within the same hospital where the main study was carried out. The pilot study ICU setting was not included in the main study. Ten nurse participants possessing similar characteristics to those used in the main study and had met the inclusion criteria filled the questionnaires following the plan for the main study. Almost all the participants felt that the items in the scale were easy to answer but 60% commented that the two open-ended questions were time consuming because one needed to think critically before responding.

However the participants suggested that the questions should not be removed but recommended that when conducting the main study, participants should be given enough time to fill the questionnaires since those questions would help in collecting important information. The point was taken into consideration. The time allocated was increased from 15 minutes to approximately 30 minutes.

ETHICAL CONSIDERATIONS

The following ethical measures were considered during the study:

- The protocol was submitted to the Department of Nursing Education for review and assessment of the feasibility of the proposed research project.
- The protocol was also submitted to the Faculty of Health Sciences Post Graduate Committee for approval.
- Ethical clearance was sought and granted from the Human Ethics Research Committee (Medical) of the University of Witwatersrand to conduct the study.
- An application was submitted for permission from the Hospital Management and Gauteng Department of Health to conduct research at the hospital.
- Participants signed a consent form after reading and understanding the information sheet presented to them.
- Code numbers were used during data collection and reporting to maintain confidentiality and anonymity of the participants.
- Participants were allowed to withdraw at anytime without penalty.
- An information letter accompanied the data collection tool in order to inform the participants about the purpose of the study.

1.8 SUMMARY

In this chapter an introduction and background of the study was presented. The problem statement, the purpose of the study and its objectives were introduced. Paradigmatic perspectives, relevant definitions and overview of the research methodology were described, including ethical consideration measures. In the next chapter, the review of literature will be presented in relation to nurse-physician collaboration.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

Nature of research builds on previous acquired knowledge and develops links between the new and the existing knowledge through the review of prior research on a specific topic (Burns & Grove, 2005). In this chapter, related literature concerning nurse-physician collaboration was reviewed. The literature review for this study followed a systematic approach of mostly primary sources and partly secondary sources. The review included relevant sources ranging in publication date from 1985 to 2009. The key words used to conduct the search were perceptions, critical care setting, collaboration, communication, cooperation, coordination, teamwork, collegial relationships, and multidisciplinary interactions. The literature search was taken from both manual and computer databases. The review was presented under distinct themes which were linked to the research objectives and were discussed as follows:

- General perceptions of nurse- physician collaboration.
- Constraints to effective nurse-physician collaboration.
- Measures to enhance effective nurse-physician collaboration.

The literature review themes presented, were later compared and contrasted with the findings of this study.

2.2 THE GENERAL PERCEPTION OF NURSE-PHYSICIAN COLLABORATION

The Oxford Advanced Learner's Dictionary defines perception as the ability to understand the true nature or reality of something, which enables one to form a particular idea, a belief or image. A review of literature has generated various perceptions of nurse-physician collaboration in association with patient care outcome, especially in the Intensive Care Units (ICUs).

Collaboration is defined as an interdisciplinary process of working together toward problem solving, shared responsibility for decision making and the ability to carry out a plan of care while working towards a common goal. (Marquis & Huston 1998, McKay & Crippen 2008), whereas Civetta, Taylor & Kirby (1997) understand nurse-physician collaboration to be the interaction between nurses and physicians that uses the knowledge and skills of both professions to enhance patient care. In that way, a team is formed that sets up goals and allows members to devise a means of achieving those goals by relying on individual member's strengths and resources. As such a relationship based on mutual trust and respect will develop (Fewster-Thuente & Velsor Friedrich 2008).

Nurses and physicians comprise the largest segment of health care providers, who are confronted daily with complex issues (Hendel, fish & Berger, 2007). Therefore they are the focus group when it comes to discussing collaboration in any patient care setting. However, Hendel et al., (2007) pointed out that nurses and physicians have not been socialised to collaborate with each other and do not believe they are expected to do so despite the demand. That is why Sterchi (2007) viewed collaboration as a means

therefore to bridge a nurse-physician relationship which all along has been believed to be stressful. It is also a vital concept that can help to incorporate a diverse team of health care providers into safe, high quality patient care in critical care settings.

An Intensive Care Unit is thought to be an appropriate setting for analysis of collaboration between nurses and physicians because it is the context that is considered complex and ideal for interdependent teamwork in health care (Stein-Parbury & Liaschenko, 2008). As such, Aari, Tarja & Helena, (2008) perceive collaboration as part of professional competence that concerns issues of teamwork and one's capacity to interact as a team member in the ICU in order to achieve daily clinical goals and negotiate complex systems issues typical of a high-stress environment. Hence, Bailey, Jones & Way (2008) argue that the placement of nurses and physicians in a common clinical practice without some form of education or orientation process does not produce collaborative practice. Similarly, Wilson, Coulon, Hillege, et al., (2005) found that total or effective collaboration among nurse practitioners, physicians and allied health care professionals remains complex and does not automatically occur. Hence, they recommend that the process of effective collaboration be consciously constructed, learned and once established, should be protected.

Nurses in the ICU are vital not only for nursing care but also for keeping ICU fellows abreast of the patients' condition (Civetta, Taylor & Kirby, 1997). Li & Lambert (2008) observed that encouraging more autonomy for nurses who work in the ICU setting enhance their opportunities to work collaboratively with physicians and improve their

sense of self worth and subsequently their job satisfaction. Russell, Campbell, Scardamalia, et al., (2005) and Hendel, et al., (2007) add that inter-professional collaboration is an effective strategy to control health care costs, improve the quality of patient care as well as provide job satisfaction.

However, other studies on collaboration have shown that nurses' own perceptions of collaboration were both positive and negative. Nurses felt satisfied whenever collaboration with physicians succeeded but also felt frustrated whenever it failed. In a study conducted by Sterchi (2007), it was observed that nurses had a more positive attitude toward collaboration than physicians and showed a willingness to be involved in team work. The study was carried out in order to find out measures which could help to bond the nurse-physician relationship, which was observed to be stressful. However, the nurses' positive attitude toward collaboration had been challenged by poor relations with physicians within the working environments. This had caused frustration and dissatisfaction amongst the nurses.

In a study carried out by Hill (2003) in order to describe the nurses' non-verbal interaction during ward rounds within the intensive care unit, it was found that nurses withdrew from contributing during ward rounds because it was felt that their contributions were being undermined. Similar findings were made by Vazirani et al., (2005) who conducted a study to determine the impact of multidisciplinary intervention on communication and collaboration between doctors and nurses in an acute inpatient unit. The findings showed that staff nurses could only interact well with specialist nurse

practitioners but not with physicians. This made staff nurses reluctant to participate in ward rounds since they felt that they were not welcome. In a study conducted by Selebic and Minnar (2007), poor relationships among staff members in general was one of the contributing factors to nurses' low satisfaction experiences and frustration in public hospitals.

2.3 CONSTRAINTS TO EFFECTIVE COLLABORATION

Clinical teams have not yet succeeded in working collaboratively. It has been suggested, therefore, that collaboration be an aspect that should go through further research so that team working can be facilitated (Goodman, 2004). In addition, Hojat, Gonnela, Nasca, et al., (2003) have emphasised that since nurse-physician collaboration can improve the level of care given to the patients as well as provide job satisfaction, it is also proper to examine different factors that affect inter-professional collaboration. A number of factors that can affect nurse-physician collaboration negatively have been identified in the literature and characterised as constraints to effective collaboration. These include: communication and coordination problems, failure of team decision making, poor conflict resolution skills, and lack of role clarification.

2.3.1 Communication and Coordination Problems

Communication is a two-way process in which there is an exchange and progression of thoughts, feelings and ideas towards a mutually accepted goal or direction (Marquis &

Huston, 1998) while coordination is defined as a process of making groups of people work together in an efficient and organised manner (Yoder-Wise, 2003). In addition, Baggs et al (1992) pointed out that effective communication and coordination are crucial for improving the quality and safety in acute medical settings. However, Reader Flin, Mearns et al., (2007) noted that hierarchical, gender, social factors as well as differences in the training methods of nurses and doctors have contributed to communication problems over the years, so affecting the maturity of effective collaboration. Burke, Boal & Mitchell (2004) argued that deficient communication among care providers is responsible for the frustration, bitter feelings and distrust which have led to inferior care and a greater risk of errors. Henneman (2007) agreed that a lot of errors in ICU were not reported due to failure in communication during handover and even during ward rounds; hence patients' safety was compromised. In addition, Crofts (2006) found that communication problems between professional teams, families, wards and even between hospitals contributed to failure to work together, resulting in patients' conditions deteriorating because there was no proper continuation of care.

2.3.2 Failure of Team Decision Making

Decision making is a complex cognitive process of choosing a particular course of action from among the alternatives (Marquis & Huston 1998). A team has been defined by Blackwell's Nursing Dictionary (2005) as a group of people in health care with a variety of skills and professional backgrounds working together with a common goal and so making decisions together. However, Coombs & Ersser (2004) found that medicine (physicians) dominated decision making while nursing remained unappreciated and undervalued, hence the expected link between team decision making and effective inter-

professional working in the ICUs could hardly be realized. The findings were consistent with the baseline survey conducted by Ulrich et al., (2006), which reported that physicians' respect for nurses' decisions was rated the lowest. This became one of the factors to be considered when standards for establishing and sustaining healthy working environments for the ICUs were being formulated by the American Association of Critical Care Nurses.

2.3.3 Conflict Resolution Skills

Conflicts in a team are inevitable. A conflict is defined as the internal or external disagreement that occurs as a result of differences in ideas, values, or beliefs of two or more people but at the same time gives opportunity for individuals in an organisation to interact (Sullivan & Decker, 1988). Although a conflict can be destructive and demoralising, it can also be a positive and dynamic force that prevents stagnation, stimulates curiosity and interest, and serves as a medium for airing problems even during patient care (Tappen, 1989).

On the contrary, Hendel, et al., (2007) observed that the conflict management options by physicians were not constructive. Whenever there was a conflict, physicians would rather opt for a lose-lose resolving approach in which there is no compromise and negotiation instead of a win–win approach, where there is negotiation and compromise between parties. On the other hand, the nurses would opt for a non-confrontational approach to a conflict so as to run away from real issues, hence the failure of the constructive conflict resolution process. Tappen (1989) suggested that as a general rule, conflicts should neither be avoided nor stimulated but managed in time. A nurse-physician collegial and

collaborative relationship could also not develop if policies related to conflict resolution are not put in place to be known and followed by everyone concerned (Schmalenberg & Kramer, 2009).

2.3.4 Lack of Role Clarification

Fewster-Thuente & Velsor-Friedrich (2008) pointed out that overlapping of responsibilities is one of the barriers to effective collaboration in the ICUs. It was observed that health care providers meet problems when it comes to role distinction, especially as to who has the responsibility for the patient. Hence, care would be delayed at times thus affecting the patient care delivery and outcomes.

2.4 MEASURES TO ENHANCE EFFECTIVE COLLABORATION

2.4.1 Communication and Interpersonal Interaction

The smooth functioning of any system is dependent on effective communication, including collaboration. Civetta et al., (1997) stated that communication is a necessity as regards to collaboration during patient care in the ICU since it aids an orderly presentation of problems which pose solutions that can be found by team members. In such a way decisions are made and errors such as misdirections, which could have occurred if one had acted independently, are avoided.

Skilled, open communication and respect between team members are recommended prerequisite standards for establishing and sustaining true collaboration in a critical care setting (Ulrich et al 2006). Stein-Parbury & Liaschenko (2008) observed that teams of interdisciplinary members effectively interacted and collaborated in non-hierarchical interpersonal working environments and that it was through interaction that relations would be established which involved the team into direct and open communication.

Fewster-Thuente & Velsor-Friedrich (2008) observed that an interdisciplinary interaction amongst members was vital. McKay & Crippen (2008) suggested that the process of collaboration require health care providers to spend time together, developing relationships, learning how to effectively communicate, trust and respect each other. Burke, et al., (2004) recommended the following measures for improving nurse-physician's communication:

- Nurses and physicians should aim at developing relationships.
- Nurses and physicians should assume that they are a team and that they have the same broad goal for the patients.
- They should recognise that they are equal as colleagues when it comes to caring for their patients.
- Nurses should also be able to report good news about the patients.
- Nurses and physicians as a team should be prepared for conflicts and devise positive means of solving those conflicts.
- Nurses and physicians should define their communication strategies through:

  - discussing communication strategies long before the crisis develops, as this acts as the best defense against miscommunication;
  - discussing preferred methods of communication;
  - agreeing on specific parameters especially nurses of contacting the physicians about an urgent matter;
- Nurses should know what to find out or to report in order to:
  - turn a conversation into an opportunity to collaborate
  - agreeing upon an approach to family members

Additional recommendations for improving communication between intensive care unit physicians and nurses have been suggested by Puntillo & McAdam (2006) in the form of joint grand rounds, patient care seminars and inter-professional dialogues. It was reasoned that these measures would enhance collaboration and result in more appropriate care and increased physician-nurse, patient, and family satisfaction.

2.4.2 Role Clarification and Shared Responsibility

Another strategy for a multidisciplinary team to effectively collaborate and attain its goals in the ICUs was that members should know their specific roles in the team and their expected shared responsibilities within their common goal (McKay & Crippen, 2008). Similarly, Fewster-Thuente & Velsor-Friedrich (2008) argued that within the multidisciplinary team there must be clear role clarification in order to eliminate errors and duplication of care while ensuring that each discipline performs its shared responsibility towards achieving the patient goals of care.

2.4.3 Coordination and Cooperation

Hendel, et al (2007) noted that various professionals need to be coordinated in order to provide organised quality patient care tasks. In a study conducted by Hov, Hedelin & Athlin (2007), it was found that effective and efficient ICU nursing care depended also on cooperation with fellow nurse colleagues, physicians and other health care providers as well as with relatives. However, the question remained as to who was to coordinate patient care in the ICUs. Bucher & Melander (1999) argued that in the ICU settings, it was appropriate that the nurse should be the coordinator of the patient care delivery because the nurse has the greatest opportunity to come in contact and interact with all the multidisciplinary team members who come across critically ill patients. In addition, Alspach (2006) pointed to the degree of effective collaboration as the main attribute for the achievement of patients' care and treatment goals and therefore supported the role of nurses as coordinators of the care. Li & Lambert (2008) also commented that nurses had to be made autonomous and that autonomy would enhance their opportunities to coordinate the care in the ICUs, and at the same time improve their sense of self worth and enhance job satisfaction.

2.4.4 Orientation and Training

It has been pointed out in literature that the key to successful inter-professional practice is education and orientation because collaboration is not innate in the health care

professionals and thus requires teaching (Bailey, et al., 2008). Educational fora assist and build new knowledge among nurses, physicians and all other heath care providers. Aari, et al., (2008) commented that teaching collaboration to team professional members in the ICUs helped them gain both clinical and professional competences in addition to enabling them to collaborate effectively. Russell et al., (2005) found that interdisciplinary team members were able to creatively work together, interact and communicate when they were being taught.

2.5 SUMMARY

This chapter provided an overview of literature related to perceptions on nurse-physician collaboration. Constraints against effective nurse-physician collaboration and remedial measures have also been discussed. The next chapter will focus on the research methodology used in this study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Research methodology refers to the steps, procedures and strategies for gathering and analysing research data (Polit & Hungler, 1997). In this chapter the research design and methodology will be discussed. This includes the research setting, study population, sample and sampling, data collection, the instrument used including its validity and reliability, pilot study, and the ethical issues considered during the study as well as the validity and reliability of the study as a whole.

3.2 RESEARCH DESIGN

A non-experimental quantitative descriptive research design was used to conduct the study. A research design refers to the overall plan for obtaining answers to the research questions. It guides the researcher in the planning and implementation of the study while optimal control is achieved over factors which could influence the study (Burns & Grove, 2005). The design was based on the purpose of the study, which was to identify and describe nurses' perceptions regarding nurse-physician collaboration in the Intensive Care Units. The quantitave descriptive design is a formal, objective and systematic process to describe a phenomenon and elaborate opinions (Burns & Grove, 2005). It can also be used to obtain data to describe and elaborate perceptions. Therefore, this design was appropriate.

3.3 RESEARCH SETTING

The study was conducted in the four Intensive Care Units at a level three tertiary public sector hospital in Johannesburg that provides all aspects of intensive care associated with its referral status. Intensive Care Units at a level three tertiary hospital were ideal settings because they are supported by complex laboratory and technological investigation and imaging services as well as specialists' consultations of all disciplines (Oh, 1997). The institution is also an academic teaching hospital where both nursing and medical students obtain their clinical experience. The four ICUs of the institution which were chosen admit trauma, cardiothoracic, coronary and general medical patients who are critically ill. Within the ICUs, the physicians (Intensivists and Registrars) are responsible for providing integrated medical care to the patients and participate in management of ICU activities which are necessary for efficient and consistent delivery of care. Nurses on the other hand are responsible for performing complex nursing activities such as assessing, supporting and monitoring of critically ill patients' haemodynamic and respiratory status.

3.4 THE STUDY POPULATION

The target population consisted of all the nurses permanently working in the four chosen ICUs (N=89). The researcher therefore targeted the accessible population of ICU nurses working full time in the four selected intensive care units to participate in the study. An accessible population is the portion of the target population to which the researcher has reasonable access (Burns & Grove, 2005). Only those who gave their written consent and returned the completed questionnaires were included (n=80).

3.5 SAMPLE AND SAMPLING METHOD

Out of the total population (N=89), a sample of 80 nurses working in Trauma, Cardiothoracic, Coronary and General/Main Intensive Care Units participated in the study. Convenience sampling was utilised to select the study participants in the selected intensive care units. According to De Vos, Strydom, Fouche, et al., (2005) convenience sampling is a non-probability form of sampling whereby any subject who happens to cross the researcher's path and has anything to do with the phenomenon is included in the sample until the desired number is obtained. In this case the researcher simply entered all the eligible and accessible ICU nurses into the study by administering to them the questionnaires if given the consent to participate after being given the information.

Inclusion criteria for the nurses were:

- Registration by the South African Council of Nursing and current working status in any of the four ICUs selected as research sites: Trauma, Cardiothoracic, Coronary, and General/Main ICUs
- Voluntary acceptance to participate in the study and signed a consent in that regard.

3.6 PILOT STUDY

A pilot study was carried out before the main study was conducted in one of the adult ICUs within the same hospital where the main study was carried out. The pilot study ICU was not included in the main study. The purpose of the pilot study was to pilot the data collection instrument prior to the main study and based on the participants' comments, amendments are made (Burns & Grove, 2005).

Ten nurse participants possessing similar characteristics to those used in the main study and had met the inclusion criteria filled the questionnaires following the plan for the main study. All (10) participants felt that the items in the scale were easy to answer but 60% commented that the two open-ended questions were time consuming because one needed to think critically before responding. However the participants suggested that the questions should not be removed but recommended that when conducting the main study, participants should be given enough time to fill the questionnaires since those questions would help in collecting important information. The point was taken into consideration. The time allocated was increased from 15 minutes to approximately 30 minutes.

3.7 DATA COLLECTION

3.7.1 The Instrument

A previously developed questionnaire, the Jefferson Scale of Attitude toward Physician-Nurse Collaboration with additional two open ended questions to cover the rest of the

research objectives was used to collect the required information (Appendix A). The suggestion to add two extra open-ended questions was recommended by the post graduate committee since it had noticed that the use of items in the scale alone would not be able to address second and third objectives of the study. Questionnaires tend to be used in descriptive studies so as to gather a broad spectrum of information from subjects, such as facts about subjects, facts about events or situations known by the subject, or beliefs, attitudes, opinions, level of knowledge or intentions of the subject (Burns & Grove 2005).

The Jefferson Scale of Attitude toward Physician-Nurse Collaboration has 15 items on a 4 point Likert scale, and was originally developed by researchers at Jefferson Medical College, Philadelphia. The scale was first used to measure physicians' attitudes toward nurses and nursing services (Hojat & Herman 1985). Items for the original scale were selected, based on a review of literature on nurse-physician relationships. The areas (constructs) addressed were: nurse-physician interactions, decision making, role expectations, authority, autonomy responsibilities for patient care and monitoring. Hojat, Fields, Rattner, et al., (1997) modified the original survey to investigate attitudes toward physician-nurse alliances. Further modifications were made to the survey in a third study in which 15 out of the 20 items of the survey were retained after extensive statistical analysis to examine the construct validity and internal consistency aspect of the instrument. The 15 items were regrouped and factor analysed under the following constructs of collaboration: caring as opposed to curing; shared education and teamwork; nurses' autonomy and physicians' authority (Hojat, Fields, Veloski, et al., 1999). Results on factor analysis carried out by Hojat, Nasca, Cohen et al., (2001) provided further

support for the construct validity of this instrument where it had scored a p-value of less than 0.01.

3.7.2 The Procedure

Permission to conduct the study was obtained from the Gauteng Department of Health and the tertiary public sector hospital. The population being 89 (N=89) a total sample (n=80) was selected. The total sample of nurses was obtained by the researcher by approaching the nurses who were working in Trauma, Cardiothoracic, Coronary, and General/Main ICUs at the institution. Participating nurses were required to complete a questionnaire, the Jefferson Scale of Attitude toward Physician-Nurse Collaboration (appendix A). Before this, the nurses were given information letters explaining the nature and purpose of the study and the voluntary nature of participation was emphasised. The questionnaires were handed out by the researcher. Then the researcher collected the questionnaires through the unit's mailboxes for the participants who could not fill the questionnaires at that same time because they were busy. But those participants who felt could respond immediately, the researcher collected the questionnaires personally and was able to give any further clarifications participants could require. Each participant was taking approximately 25-30 minutes to complete the questionnaire. The total number of responses achieved was eighty (n=80).

3.7.3 Validity and Reliability of the Instrument

Validity refers to the ability of the instrument to measure accurately what it is supposed to measure (Burns & Grove 2001); whereas reliability refers to the consistence and stability of an instrument over time and conditions (Polit & Beck, 2004). Reliability is

expressed as a form of correlation coefficient with 1.00 indicating a perfect reliability and 0.00 indicating no reliability. The Jefferson Scale of Attitude toward Physician-Nurse Collaboration has been used in a number of cross-cultural studies (Hojat, et al., 2001; Hojat, et al., 2003 & Yildirim, et al., 2005). The test-re-test reliability, Cronbachi's alpha, was 0.71 and 0.75 (Yildirim, et al., 2005) respectively. A reliability of 0.80 is considered the lowest acceptable coefficient for a well developed measurement tool whereas a reliability of 0.70 is considered acceptable for a newly developed instrument (Burns & Grove, 2001). In all these cross cultural studies the findings therefore, indicated that the instrument was statistically sound with satisfactory measurement characteristics. The coefficient of this instrument for this study was measured at 0.804.

In a review of instruments which had been used to measure nurse-physician collaboration by Dougherty & Larson (2005), the scale was one of the tools that met the criteria after undergoing reliability and validity testing. Hence the tool was recommended for future research to measure nurse-physician collaboration.

3.7.4 Data Analysis

Data analysis is carried out in order to reduce, organise and give meaning to the data that has been collected (Burns & Grove, 2007). Descriptive statistics were used to analyse the major study variables and sample demographics. Mean scores for the items on the Jefferson Scale of Attitude toward Physician-Nurse Collaboration were determined in order to compare nurses' perceptions and attitudes in regard to their gender, years of experience and critical care training status. One sample t-test was used to test for

significance of mean score differences. A t-test is used to compare means of one or two groups of a sample (Burns & Groves 2005). More statistical assistance was sought from a statistician from the Medical Research Council. Open ended questions were analysed through content analysis.

3.8 ETHICAL CONSIDERATIONS

A study requires the researcher to consider protection of human rights of the informants (Burns & Grove, 2005). The rights that require protection include self determination, privacy, autonomy and confidentiality, fair treatment and protection from discomfort and harm. In order to consider all the rights, the following ethical issues were considered:

- The protocol was submitted to the Department of Nursing Education for review and to assess the feasibility of the proposed research project.
- The protocol was submitted to the Faculty of Health Sciences Post Graduate Committee for approval. Permission was granted (Appendix B)
- Ethical clearance to conduct the study was sought from the Human Ethics Research Committee (Medical) of the University of Witwatersrand. The research was approved and an ethical clearance certificate number M081012 was issued (Appendix C).
- An application was made for permission from the Hospital Management to conduct the research at the hospital. Permission was obtained (Appendix D).
- An information letter accompanied the data collection tool in order to inform the participant about the purpose of the study (Appendix E).

- Participants signed a consent form after reading and understanding the information sheet to participate in the study (Appendix F).
- Anonymity was ensured by using code numbers instead of participants' names.
- Participants were allowed to withdraw at anytime without penalty.
- Results will be shared to hospital management and nursing staff from the hospital.

3.9 SUMMARY

In this chapter, methodological issues have been discussed. These include research design, the study population, the research setting, and the data collection procedure. The instrument used was also discussed, including its validity and reliability. In addition, ethical issues which were considered for the study were mentioned. The next chapter will describe the results after analysing the data.

CHAPTER 4

DATA ANALYSIS AND DISCUSSION OF RESULTS

4.1 INTRODUCTION

This chapter presents the analysis and results of data, describing the nurses' perceptions, constraints, and recommendations regarding nurse-physician collaboration in the Intensive Care Units at a level three tertiary hospital in Johannesburg. The Jefferson scale of attitude questionnaire was administered so as to identify the nurses' opinions. Data collected on the nurses' perceptions regarding nurse-physician collaboration were analysed using descriptive and inferential statistics. Content analysis was the approach for the data collected on the nurses' perceived constraints and recommendations to nurse-physician collaboration. The content was analysed by grouping the responses into meaningful categories since the participants were responding to two open- ended questions which were added onto the instrument in order to answer the rest of the study objectives.

4.2 APPROACH TO DATA ANALYSIS

The first part of the data containing the nurses' perceptions was analysed using quantitative approach. The instrument used was the Jefferson Scale of Attitude toward Nurse-Physician Collaboration which has 15 items. The items in this scale were answered on a 4-point Likert-type of scale from strongly agree to strongly disagree. The higher the score on this scale the more positive the attitude toward nurse-physician collaboration. Data were entered on Microsoft excel spread sheet and analysed using STATA version

10. Reliability of the measuring tool with respect to the 15 items was examined by calculating the Cronbach's alpha. The internal consistency of the 15 items was expressed by alpha of 0.804, which suggested that the instrument was reliable and that it had measured the attributes under investigation. A reliability of 0.80 is considered the lowest acceptable coefficient for a well developed measurement instrument (Burns & Grove, 2001).

Descriptive statistics were applied where the frequencies, percentages and means of the findings were reflected. Figures, tables and graphs were used to enhance interpretation. Total scores on the Jefferson Scale were computed for the nurses' general perceptions in relation to the explanatory variables namely: gender, years of experience and registered intensive and critical care nurses' status. In addition, the scores on the Jefferson Scale were computed using a t-test for the four main constructs of perception which are grouped as: shared educational and teamwork; caring as opposed to curing; nurses' autonomy and physician's authority in relation to gender, experience and registered intensive and critical care status.

The results were correlated using the inferential statistical method known as Fisher's exact test. Fisher's exact test is a statistical significance test in the analysis of an exact probability value for the relationship between two dichotomous variables where sample sizes are small (Myles & Gin, 2000). In this study Fisher's exact test was used to test the significance in the relationship between demographic data and perception, e.g. gender and perception, Registered Intensive and critical care nurse status and perception, and

years of experience and perception. All tests were done at p value of 0.054 as level of significance.

The second part contained data/content on the two open- ended questions which were used to elicit the nurses' perceived constraints and identfy recommendations to enhance effective nurse-physician collaboration. The participants were responding to these two open- ended questions which were added onto the instrument in order to answer the rest of the study objectives. The data/content were analysed by grouping the responses into meaningful categories. However, the quotes in the content analysis were included in order to illustrate the chosen categories.

4.3 ANALYSIS OF RESULTS AND DISCUSSION OF THE FINDINGS

The accessible population which was also the total population was (N= 89). Out of these 92.1% (n=82) gave their consent to participate in the study. 80 returned the questionnaires which gave a response rate of 90%, and only 2% (n= 2) did not return their questionnaires. Not all the respondents completed all the items on the questionnaire. 18.8% (n= 15) of the participants did not give their responses on the two open-ended questions. 6.3% (n=5) omitted to fill their gender on the questionnaire; 2.5% (n=2) did not indicate their years of work experience in the intensive care units.

4.3.1 Demographic Data of the Participants

4.3.1.1 Gender

The results showed that 13.33% (n=10) of the participants were male and 86.67% (n=65) were female. This reflects a trend in that most men do not enroll for the nursing profession in South Africa. Different explanations have been posited as to why this is so; that due to little or no career guidance concerning nursing in the high schools few males enroll for nursing education. There is also a contributing myth whereby males fear that if they join the nursing profession they will be seen as not being manly by their peers and clients (Kelly, Shoemaker & Steel 1996). **Figure 4.1** depicts this result graphically.

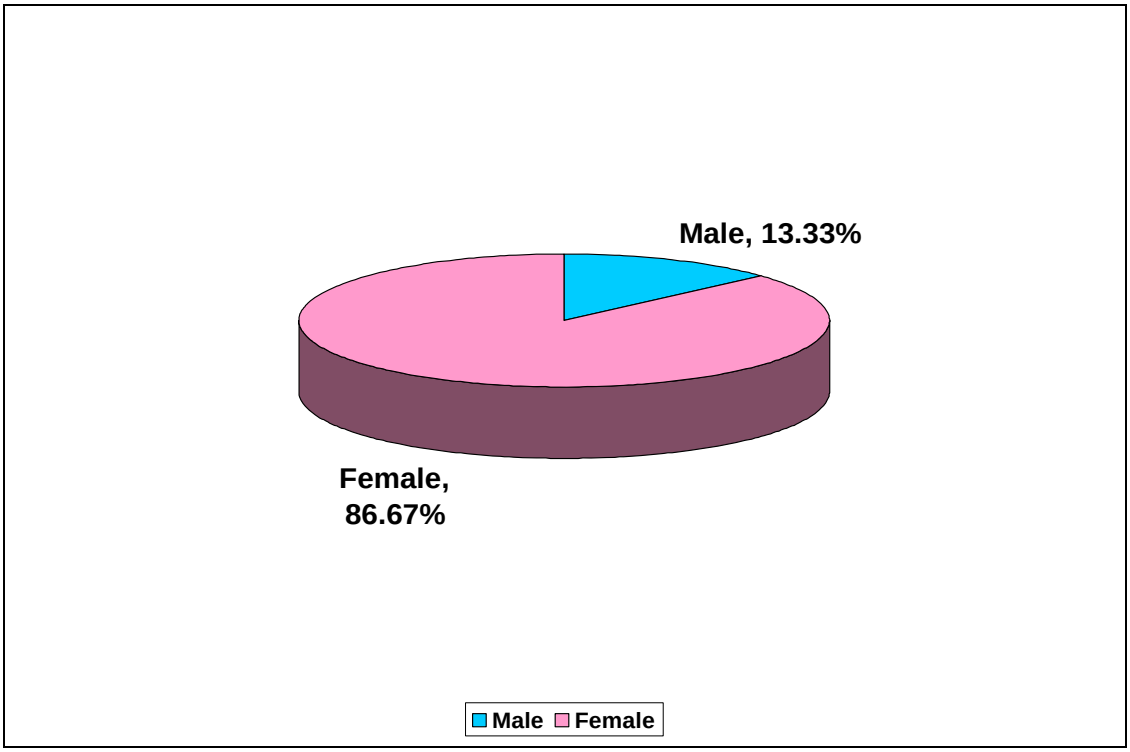

Figure 4.1: Gender of the participants

4.3.1.2 Experience

Approximately eighty percent (n=62) participants had 10 years or less of working experience in the ICU whereas 20.51% (n=16) had worked in the ICU for 11 years or more: **(See figure 4.2).** This could possibly be attributed to the fact that nurses with more years of experience in the ICUs leave the public hospitals or join nursing teaching institutions or leave for other challenging positions. A lot of nurses with more experience are significantly required in the critical care settings as indicated by McMillen, (2008) who maintains that more experienced nurses make important contributions because they approach areas which require critical decision making with caution.

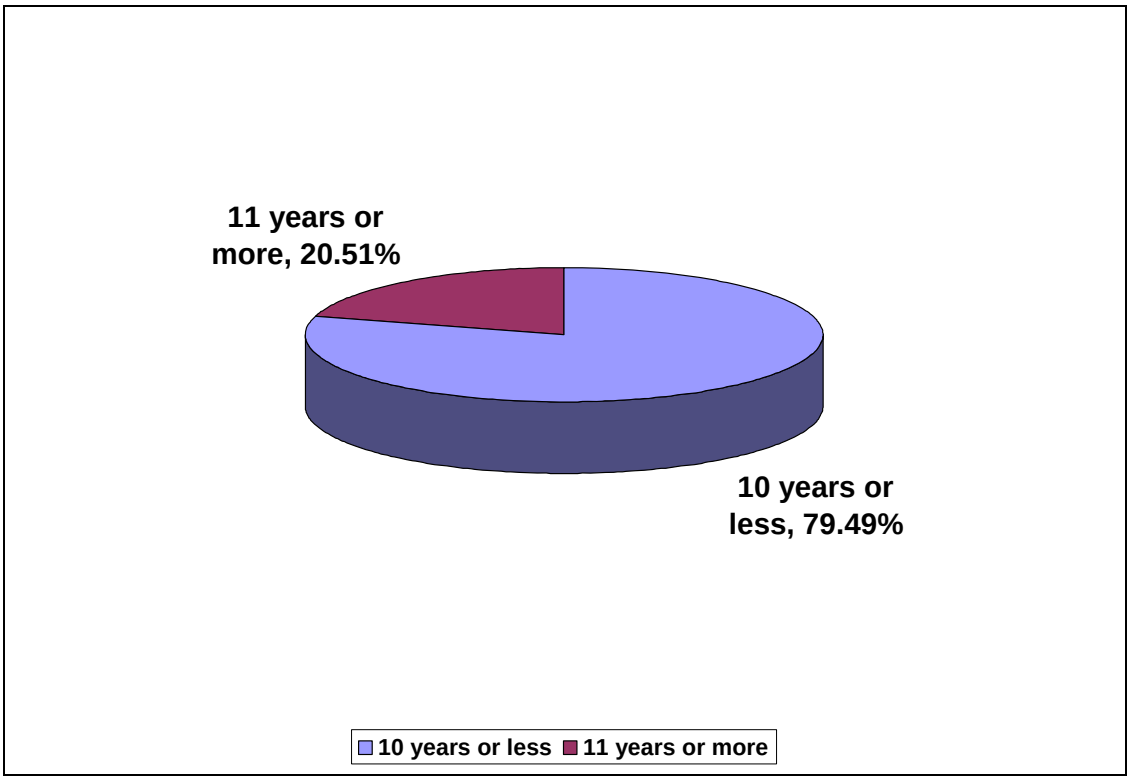

Figure 4.2: Years of work experience in ICU

4.3.1.3 Intensive and Critical care Nurses' Registration Status

The results showed that 51.47% (n=35) were registered intensive and critical care nurses and 48.53% (n=33) were not registered intensive and critical care nurses. This is not consistent with what Scribante, Schmollgruber, & Nel (2004) found in their study which revealed an acute shortage of registered critical care nurses working in the ICU of South Africa, estimated at 26%. However, these findings could be true since the current study

was conducted at a single level-3 tertiary hospital which has more than one ICU and is a teaching hospital. The findings are depicted graphically in **figure 4.3.**

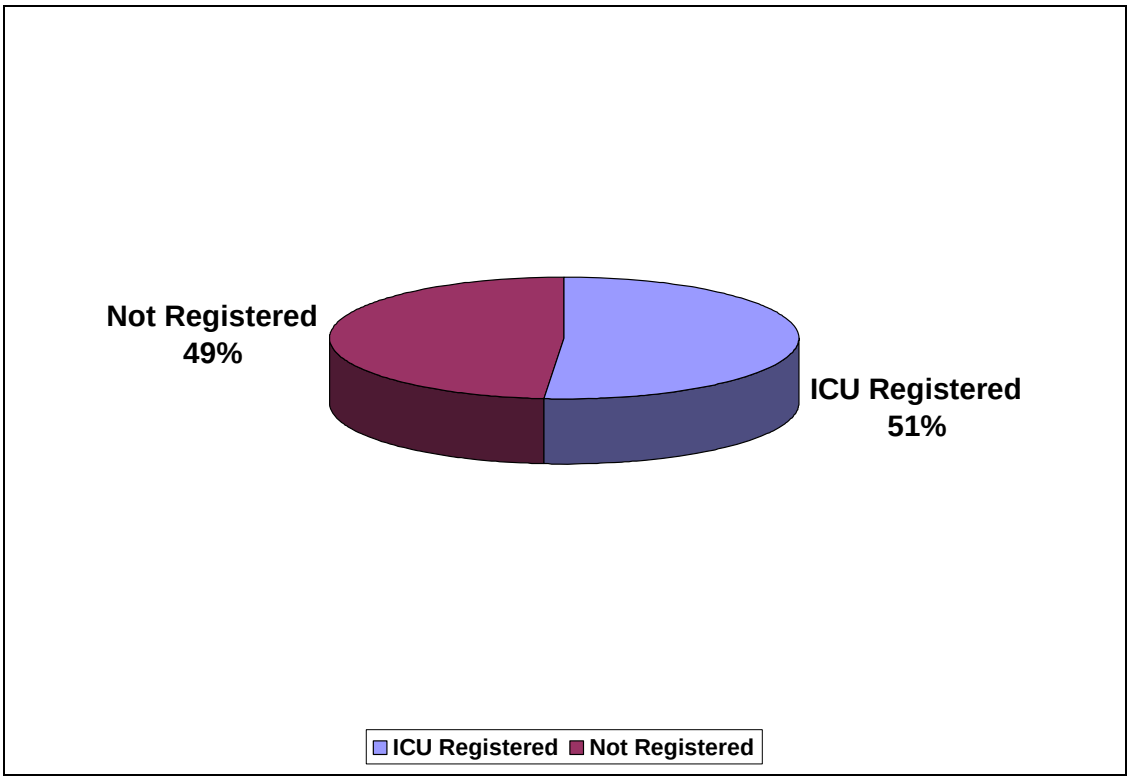

Figure 4.3: Intensive and Critical care Nurses' Registration Status

4.3.1.4 Age distribution

In terms of age distribution for the participants, there was a bell shaped curve that showed that there was normal age distribution for the participants. The age groups ranged between 23 and 56 years with the mean age of 39.03. The findings showed that 33.8% of the sample consisted of the largest number of nurses within the age group of 36 and 40 years (n=26). This was a good outcome which would probably indicate that the majority of the nurses are still in the midst of the productive years and capable to pursue further

specialised studies. The minimum age was 23 years and maximum age was 56 years. The lowest number (n=1) of the participants was above 50 years (1.3%), **figure 4.4** illustrates the age distribution.

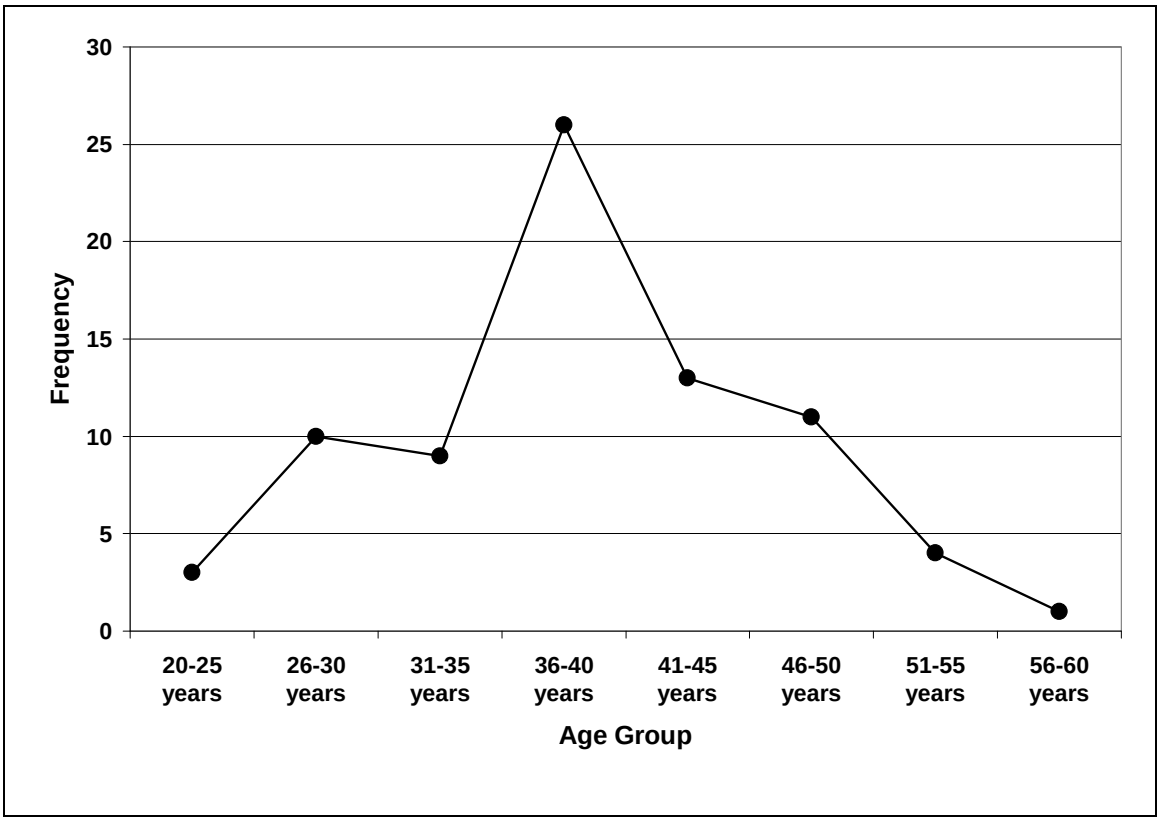

Figure 4.4: Age distribution

4.3.2 Nurses' Perceptions

The nurses' perceptions towards nurse-physician collaboration in the ICU were examined through the 15 Likert type of items on the Jefferson Scale of Attitude toward Nurse-Physician Collaboration. The perceptions were identified and examined in general and

then in relation to the nurses' gender, ICU work experience and critical care registration status based on the scale.

4.3.2.1 Nurses' perceptions in general

The results showed that the majority of the participants significantly agreed 100% (n=80) to the top five Items: 2, 3, 4, 5 and 12. Item 2 states that, "Nurses are qualified to assess and respond to psychological aspects of patients," item 3 states that, "During their education, medical and nursing students should be involved in teamwork in order to understand their respective roles," item 4 states that, "Nurses should be involved in making policy decisions affecting their working conditions," item 5 states that, "Nurses should be accountable to patients for the nursing care they provide," and item 12 indicates that, "Nurses should also have responsibility for monitoring the effects of medical treatment." This shows that nurses have a positive attitude towards nurse-physician collaboration because of their perception. The items which they have strongly agreed to are the ideal attributes to collaboration and reflect the true nature of effective nurse-physician collaboration. These factors stipulate what is required of a critical care nurse if nurse-physician collaboration is to be established. Therefore, the nurses' positive perception towards collaboration agrees with previous studies which have also indicated that nurses have a positive attitude to nurse-physician collaboration (Sterch, 2007; Yildirim, et. al., 2005 & Rosenstein, 2002). However, the findings differed from the findings of Thomas, Sexton & Helmreich (2003) in which nurses attitude toward collaboration rated lower than physicians.

However, the study results showed that participants strongly disagreed with item 8 which scored 81.81% (n=63). Item 8 states that, “physicians should be dominant authority in all health matters” The nurses’ disagreement or rejection to this item indicates also the nurses’ positive perception about nurse-physician collaboration. This item militates against the establishment of effective nurse-physician collaboration in the ICUs. Nurses would not be free to be involved in patient care decisions if the physician’s authority is dominant. In view of that, Mckeon, Oswaks & Cunningham, (2006) stated that authority is necessary to accomplish goals but it is also a problem with opportunities for abuse.

About sixty percent (n=49) of the participants disagreed to item 10 which states that, “the primary function of the nurse is to carry out the physician’s orders.” Carrying out of physicians’ prescriptions is part of the nurses’ responsibility as long as the physicians are aware of the nurses’ scope of practice and do not abuse that role of the nurse. It has been found that the majority of physicians lack knowledge of the nurses’ roles and this adversely affects the physicians’ ability to visualise collaborative practice. As such, they may treat nurses as their subordinates giving orders in a directive manner (MacDonald & Katz 2002). **Table 4.1** illustrates the results.

Table 4.1: Nurses' perceptions in General

Items	(n)	Scale	Frequency	(%)
1 A nurse should be viewed as a collaborator and colleague with a physician rather than his/her assistant	79	Agree	76	96.20
		Disagree	3	3.80
2 Nurses are qualified to assess and respond to psychological aspects of patients'	79	Agree	79	100
		Disagree	0	0
3 During their education, medical and nursing students should be involved in teamwork in order to understand their respective roles	80	Agree	80	100
		Disagree	0	0
4 Nurses should be involved in making policy decisions affecting their working conditions	80	Agree	80	100
		Disagree	0	0
5 Nurses should be accountable to patients for the nursing care they provide	80	Agree	80	100
		Disagree	0	0
6 There are many overlapping areas of responsibility between nurses and physicians	79	Agree	73	92.4
		Disagree	6	7.6
7 Nurses have special expertise in patient education and psychological counselling	79	Agree	75	94.93
		Disagree	4	5.06
8 Physicians should be the dominant authority in all health matters	77	Agree	14	18.18
		Disagree	63	81.81
9 Nurses and physicians should contribute to decisions regarding patient discharge from the ICU	80	Agree	75	93.75
		Disagree	5	6.25
10 The primary function of the nurse is to carry out the physician's orders	79	Agree	30	37.97
		Disagree	49	62.03
11 Nurses should be involved in making policy decisions regarding the hospital support services upon which their work depends	77	Agree	74	96.10
		Disagree	3	3.90
12 Nurses should also have responsibility for monitoring the effects of medical treatment	79	Agree	79	100
		Disagree	0	0
13 Nurses should clarify a physician's order when they feel that it might have the potential for detrimental effects on the patient	80	Agree	77	96.25
		Disagree	3	3.75
14 Physicians should be educated to establish collaborative relationships with nurses	80	Agree	77	96.26
		Disagree	3	3.75
15 Interprofessional relationships between nurses and physicians should be included in their educational programs	77	Agree	74	96.10
		Disagree	3	3.90

4.3.2.2 Nurses' perceptions in relation to gender

Male and female nurses' perception was examined to establish whether gender has any significant relationship on the perception of nurse-physician collaboration in the ICUs. In general, there was no significant relationship as most of the items scored more than the set significant p-value of 0.054. This showed that there was not much significant difference in perception between male and female nurses. Literature has shown that demographic explanatory variables such as age and gender do not give significant correlation in forming attitudes towards nurse-physicians relationships (Hojat et al., 2003).

However, there was a significant difference in perception on item 10 which states that the primary function of the nurse is to carry out physician's orders [90% (n=9) of the male nurses with p-value of 0.031] . Male nurses probably feel strongly that collaboration cannot work if nurses are just meant to carry out the physicians' orders without being involved. However, it is difficult to generalise these findings because of the small representation of male participants in this study. **Table 4.2** illustrates the results. Male nurses significantly rejected item 10.

Table 4.2: Nurses' perceptions in relation to gender

Items	Gender	(n)	Agree	Disagree	p-value
1 A nurse should be viewed as a collaborator and colleague with a physician rather than his/her assistant	Male	10	10	0	1.000
	Female	64	61	3	
2 Nurses are qualified to assess and respond to psychological aspects of patients'	Male	10	10	0	0.277
	Female	64	64	0	
3 During their education, medical and nursing students should be involved in teamwork in order to understand their respective roles	Male	10	10	0	1.000
	Female	65	65	0	
4 Nurses should be involved in making policy decisions affecting their working conditions	Male	10	10	0	1.000
	Female	65	65	0	
5 Nurses should be accountable to patients for the nursing care they provide	Male	10	10	0	0.192
	Female	65	65	0	
6 There are many overlapping areas of responsibility between nurses and physicians	Male	10	10	0	0.671
	Female	65	65	0	
7 Nurses have special expertise in patient education and psychological counselling	Male	9	8	1	0.574
	Female	65	62	3	
8 Physicians should be the dominant authority in all health matters	Male	10	1	9	0.950
	Female	62	12	50	
9 Nurses and physicians should contribute to decisions regarding patient discharge from the ICU	Male	10	10	0	0.378
	Female	65	60	5	
10 The primary function of the nurse is to carry out the physician's orders	Male	10	1	9	0.031
	Female	64	28	36	
11 Nurses should be involved in making policy decisions regarding the hospital support services upon which their work depends	Male	10	9	1	0.207
	Female	62	60	2	
12 Nurses should also have responsibility for monitoring the effects of medical treatment	Male	10	10	0	1.000
	Female	64	64	0	
13 Nurses should clarify a physician's order when they feel that it might have the potential for detrimental effects on the patient	Male	10	10	0	0.757
	Female	65	63	2	
14 Physicians should be educated to establish collaborative relationships with nurses	Male	10	10	0	0.421
	Female	65	63	2	
15 Interprofessional relationships between nurses and physicians should be included in their educational programs	Male	10	10	0	0.668
	Female	63	60	3	

4.3.2.3 Nurses' perceptions in relation to ICU working experience

The results showed that item 6 which state that, "there are many overlapping areas of responsibility between nurses and physicians," scored a significant p-value of 0.020 (less than the set significant *p*-value of 0.054 for this study). About ninety six percent (n=60) nurses with ≤ 10 years of experience and 81.22% (n=13) nurses with ≥ 11 years of working experience both perceive and believe that there are many overlapping areas of responsibility between nurses and physicians in the ICUs. Overlapping of areas of responsibility can create role confusion and becomes a constraint to the development and maintenance of effective collaboration amongst team members. Patient care delivery can be affected since some of interventions can be left undone (Fewster-Thuente & Velsor-Friedrich 2008).

The study findings also showed that item 14 which indicates that, "physicians should be educated to establish collaborative relationship with nurses," scored a significant p-value of 0.045. The results indicated that 100% (n=62) nurses with ≤ 10 years working experience and 87.5% (n=14) nurses with ≥ 11 years of experience both agreed and believe that physicians should be educated to establish collaborative relationships with nurses in the ICU. Bailey, et al., (2008) emphasised that a key to successful interprofessional practice is education and orientation because collaboration is not innate in the health care professionals and thus requires teaching. Educational fora assist to build new knowledge among nurses, physicians and all other heath care providers. The similar idea was supported by Aari, Tarja & Helena (2008) who stated that teaching on collaboration to team professional members in the ICUs helps to gain both clinical and

professional competences, in addition to enhancing effective collaboration. **Table 4.3** illustrates the results.

Table 4.3: Nurses' perceptions in relation to ICU working experience

Items	Gender	(n)	Agree	Disagree	p-value
1 A nurse should be viewed as a collaborator and colleague with a physician rather than his/her assistant	≤10yrs	61	58	3	0.405
	≥11yrs	16	16	0	
2 Nurses are qualified to assess and respond to psychological aspects of patients'	≤10yrs	61	61	0	1.000
	≥11yrs	16	16	0	
3 During their education, medical and nursing students should be involved in teamwork in order to understand their respective roles	≤10yrs	62	62	0	0.273
	≥11yrs	16	15	1	
4 Nurses should be involved in making policy decisions affecting their working conditions	≤10yrs	62	62	0	1.000
	≥11yrs	16	16	0	
5 Nurses should be accountable to patients for the nursing care they provide	≤10yrs	62	62	0	1.000
	≥11yrs	16	16	0	
6 There are many overlapping areas of responsibility between nurses and physicians	≤10yrs	62	60	2	0.020
	≥11yrs	16	13	3	
7 Nurses have special expertise in patient education and psychological counselling	≤10yrs	61	59	2	0.338
	≥11yrs	16	14	2	
8 Physicians should be the dominant authority in all health matters	≤10yrs	59	11	48	0.346
	≥11yrs	16	3	13	
9 Nurses and physicians should contribute to decisions regarding patient discharge from the ICU	≤10yrs	62	60	2	0.114
	≥11yrs	16	14	2	
10 The primary function of the nurse is to carry out the physician's orders	≤10yrs	62	24	38	0.976
	≥11yrs	15	5	10	
11 Nurses should be involved in making policy decisions regarding the hospital support services upon which their work depends	≤10yrs	59	56	3	0.791
	≥11yrs	16	16	0	
12 Nurses should also have responsibility for monitoring the effects of medical treatment	≤10yrs	61	61	0	0.572
	≥11yrs	61	61	0	
13 Nurses should clarify a physician's order when they feel that it might have the potential for detrimental effects on the patient	≤10yrs	62	60	2	0.670
	≥11yrs	16	16	0	
14 Physicians should be educated to establish collaborative relationships with nurses	≤10yrs	62	62	0	0.045
	≥11yrs	16	14	2	
15 Interprofessional relationships between nurses and physicians should be included in their educational programs	≤10yrs	60	59	1	0.244
	≥11yrs	16	15	1	

4.3.2.4 Nurses' perceptions in relation to intensive and critical care specialty registration status

Nurses' perceptions and attitudes toward nurse-physician collaboration were examined in relation to their intensive and critical care specialty registration status. The results showed that there was a significant p-value of 0.021 on item 2 which states that, "Nurses are qualified to assess and respond to psychological aspects of patients." All the respondents 100% (n=34) of ICU registered nurses and 100% (n=33) non ICU registered nurses significantly agreed that nurses are qualified to assess and respond to psychological aspects of patients. This is probably an aspect nurses are called to provide holistic care to the critically ill patients through meeting their psychological and social needs regardless of the nurses' area of clinical specialty. This aids in maximising patient care outcome.

Again there was a significant p-value of 0.031 on item 6 which says, "There are many overlapping areas of responsibility between nurses and physicians in the ICU. Both groups, ICU registered nurses 94.3% (n=33) and 90.9% (n=30) non ICU registered nurses strongly agreed that there are many overlapping areas of responsibility between nurses and physicians in the ICUs. This probably indicates that overlapping of responsibilities could be area of concern as regards to the establishment of effective nurse-physician collaboration in the ICUs as expressed before. **Table 4.4** presents the findings.

Table 4.4: Nurses' perceptions in relation to intensive and critical care specialty registration status

Items	Gender	(n)	Agree	Disagree	p-value
1 A nurse should be viewed as a collaborator and colleague with a physician rather than his/her assistant	Registered	35	33	2	0.753
	Not Reg.	32	31	1	
2 Nurses are qualified to assess and respond to psychological aspects of patients'	Registered	34	34	0	0.021
	Not Reg.	33	33	0	
3 During their education, medical and nursing students should be involved in teamwork in order to understand their respective roles	Registered	35	34	1	0.258
	Not Reg.	33	33	0	
4 Nurses should be involved in making policy decisions affecting their working conditions	Registered	35	35	0	0.730
	Not Reg.	33	33	0	
5 Nurses should be accountable to patients for the nursing care they provide	Registered	35	35	0	0.730
	Not Reg.	33	33	0	
6 There are many overlapping areas of responsibility between nurses and physicians	Registered	35	33	2	0.031
	Not Reg.	33	30	3	
7 Nurses have special expertise in patient education and psychological counselling	Registered	35	32	3	0.108
	Not Reg.	33	32	1	
8 Physicians should be the dominant authority in all health matters	Registered	33	7	26	0.428
	Not Reg.	32	5	27	
9 Nurses and physicians should contribute to decisions regarding patient discharge from the ICU	Registered	35	34	1	0.258
	Not Reg.	33	31	2	
10 The primary function of the nurse is to carry out the physician's orders	Registered	35	11	24	0.089
	Not Reg.	32	17	15	
11 Nurses should be involved in making policy decisions regarding the hospital support services upon which their work depends	Registered	33	31	2	0.679
	Not Reg.	32	31	1	
12 Nurses should also have responsibility for monitoring the effects of medical treatment	Registered	34	34	0	1.000
	Not Reg.	33	33	0	
13 Nurses should clarify a physician's order when they feel that it might have the potential for detrimental effects on the patient	Registered	35	34	1	0.758
	Not Reg.	33	32	1	
14 Physicians should be educated to establish collaborative relationships with nurses	Registered	35	34	1	0.473
	Not Reg.	33	31	2	
15 Interprofessional relationships between nurses and physicians should be included in their educational programs	Registered	34	33	1	0.759
	Not Reg.	33	31	2	

4.3.2.5 Nurses' Perception in relation to the four constructs of collaboration

Nurses' perceptions were examined in relation to the four constructs of collaboration namely: caring as opposed to curing, shared education and teamwork, nurses' autonomy and physician's authority which are grouped under the Jefferson Scale of Attitudes toward Nurse-Physician Collaboration. Under each construct, a higher mean score indicated significant agreement to the construct, whereas the lowest score indicates significant disagreement or rejection to the construct.

The study findings indicated that shared education and teamwork as a construct had significantly higher mean scores as follows: under gender, male nurses' mean score was 25.8 (SD=1.932) whereas female nurses' mean score was 24.984 (SD= 2.735); under experience, nurses with $\leq$ 10 years experience had a mean score of 25.064 (SD=2.468) whereas nurses with $\geq$ 11 years experience had a mean score of 25.5 (SD=2.943); and under ICU registration, ICU registered nurses had a mean score of 25.428 (SD=2.703) whereas non ICU registered nurses had a mean score of 24.848 (SD=2.538).

The findings of this study also showed that the construct of physician's authority had significantly lower mean scores as follows: under gender, male nurses had a mean score of 3.1 (SD= 1.595) while female nurses had a mean score of 4 (SD=1.75); under experience, nurses with $\leq$ 10 years experience had a mean score of 3.935 (SD=1.754) while nurses with $\geq$ 11 years experience had a mean score of 3.562 (SD=1.824); and under ICU registration, ICU registered trained nurses' mean score was 3.857 (SD=1.751)

whereas non ICU registered nurses' mean score was 4.090 (SD=1.774). **Table 4.5** illustrates the findings.

Table 4.5: Nurses' perceptions in relation to four constructs of collaboration

Theme/Construct	Variable	Mean score	Std. Dev	P value
Caring as opposed to curing.	Gender:			0.186
	male	10.5	1.58	
	female	11.061	1.18	
	Experience:			0.851
	≤ 10 years	11. 064	1.239	
	≥ 11 years	11	1.154	
	ICU Reg.:			0.148
	Registered	11.171	1.248	
	Not Reg.	10.727	1.256	
Shared education and teamwork.	Gender:			0.368
	male	25.8	1.932	
	female	24.984	2.735	
	Experience:			0.547
	≤ 10 years	25.064	2.468	
	≥ 11 years	25.5	2.943	
	ICU Reg.:			0.365
	Registered	25.428	2.703	
	Not Reg.	24.848	2.538	
Nurses' autonomy.	Gender:			0.153
	male	11.5	.971	
	female	10.815	1.445	
	Experience:			0.273
	≤ 10 years	10.887	1.438	
	≥ 11 years	11.312	1.078	
	ICU Reg.:			0.996
	Registered	10.971	1.504	
	Not Reg.	10.969	1.334	
Physicians' authority.	Gender:			0.130
	male	3.1	1.595	
	female	4	1.75	
	Experience:			0.454
	≤ 10 years	3.935	1.754	
	≥ 11 years	3.562	1.824	
	ICU Reg.:			0.586
	Registered	3.857	1.751	
	Not Reg.	4.090	1.774	

4.3.1 The Nurses' Perceived Constraints to Effective Nurse-Physician Collaboration

Eighty percent (n=65) of the participants' gave their written responses regarding the constraints that affect nurse-physician collaboration in the intensive care units. The written responses were then carefully analysed using content analysis. The responses were categorised and although this is not a qualitative study, it was noted that the categories appeared to reflect certain themes. One main theme emerged: "*Superior-Subordinate" Working Relationships.* This theme embraced two sub-themes, namely: *physicians' superior attitude* and *nurses' inferiority complex*. Role confusion and workload were also found to be the other main contributing sub-theme constraints. **Figure 4.5** illustrates the summary of the findings

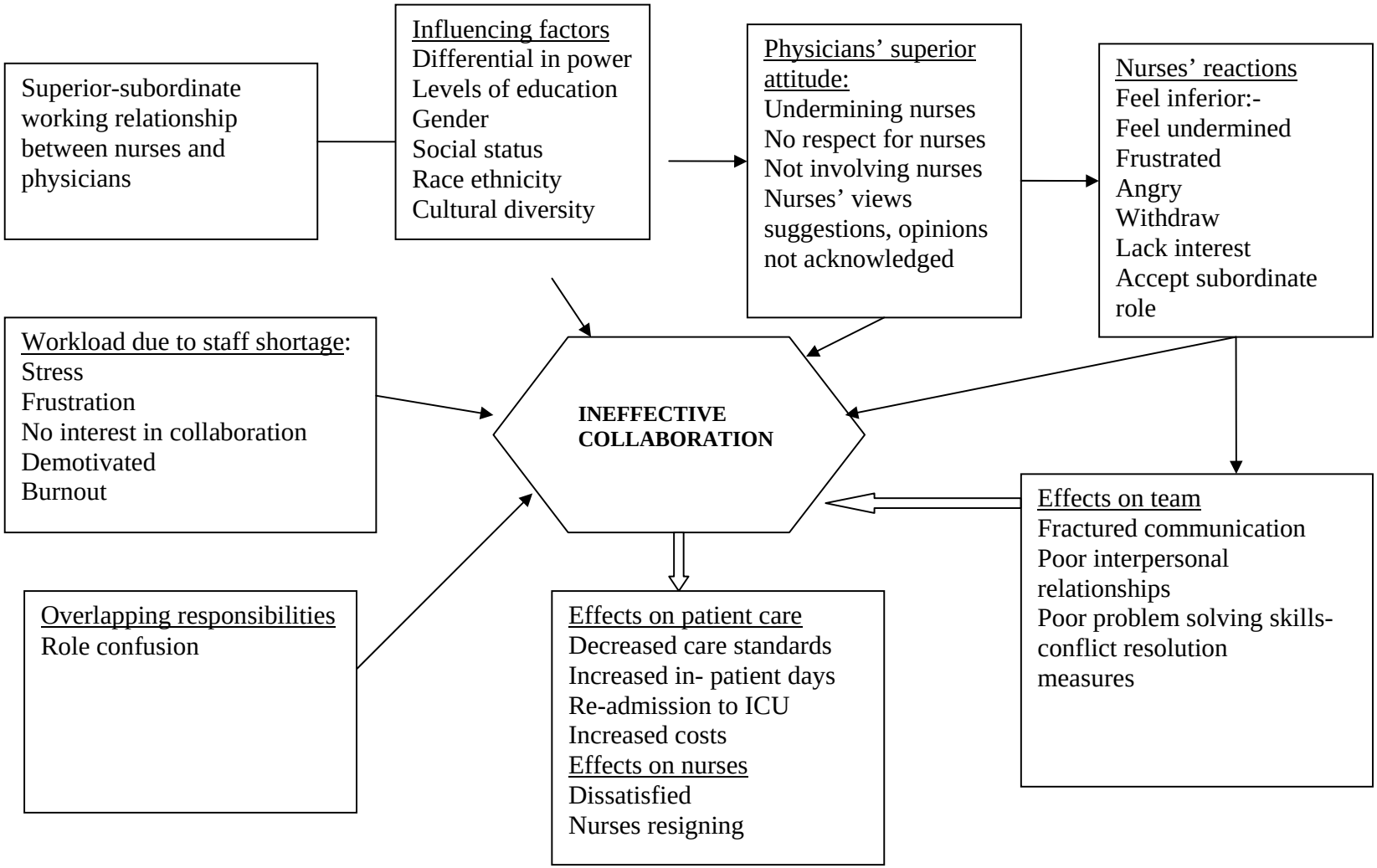

Figure 4.5: Nurses' perceived constraints to nurse-physician collaboration in the ICUs: a conceptual map.

4.3.3.1 Physicians' superior attitude

Seventy five percent (n=49) of the nurses indicated that most of physicians display an attitude of superiority towards the nurses in their working relationship in the ICUs. The physicians' superior attitude has been influenced by factors such as, differences in education, gender, culture, race ethnicity and social status. Most participants indicated that this has resulted in failure of the multidisciplinary team members to work as colleagues and a prevailing general superior-subordinate communication working relationship.

Forty eight percent (n=31) of the participants felt that physicians perceive themselves to be more knowledgeable than the nurses as illustrated by some participants,

"Most of the physicians really feel that they are more knowledgeable than nurses because they spend many years studying at school."

"Most physicians always regard nurses as least educated and think that they need to be treated as slaves or their maids."

Educational backgrounds bring power differences that mostly exist between professionals and can affect collaborative practice development in a team (Martin-Rodriguez, Beaulieu, D'amour, et al., 2005).

Thirty one percent (n=20) of the participants mentioned that most male physicians find the opportunity to show that since they are male, female nurses should not be questioning them like the way things are in other traditional cultures where females are supposed to listen to their male counterparts whether they are right or wrong, as indicated by one participant,

"Some male physicians say that as long as they are male doctors, they are more knowledgeable and their decision is final and that no female nurse can question them"

As noted by Martin-Rodriguez, et al., (2005), equality between professionals is impeded where there are power differences based on gender stereotypes, and disparate social levels among the professionals in a team and these constitute important barriers to interprofessional collaboration.

Some participants felt that race and differences in social status also contribute to the physicians' superior attitude, as illustrated by some participants,

"Race and social status affect our working relations with doctors since most white doctors regard themselves as well to do and can be offering help to less privileged nurses, as such one does not feel like a colleague to that physician but rather his/her subordinate"

Similar findings were reported by Martin-Rodriguez, et al., (2005) who indicated that other elements outside organisations such as social and cultural systems are a source of

power difference that may exist between professionals in a team and these factors have an impact on how collaborative practice develops.

Nurses felt that because of this attitude of superiority, physicians often undermine the nurses and nurses may not be respected, as mentioned by one participant,

"Generally doctors do not respect us as nurses and they always think that nurses are their juniors such that they do not treat us as their colleagues."

In addition nurses felt that their views, opinions and suggestions are not taken seriously and that most of the time nurses are not involved in the patients' care planning neither are they involved in decision making activities nor consulted, as indicated by another participant,

"Mostly physicians do not seek for advice from us nurses and do not even accept our suggestions and mostly they tend to be directive in giving their orders."

"Sometimes doctors discharge patients who are not really fit to move from the ICU just because they want to admit other patients. In such cases they neither ask opinions from the nurses nor involve them, as a result some of those patients crash in the ward and get readmitted to the ICU with many irreversible complications," the other participant commented.

Rothschild, Landrigan, Cronin, et al., (2005) & Despins (2009) indicated that poor collaboration resulted in an estimated 148,000 life-threatening errors occurring in the

United States of America in critical care areas of teaching hospitals annually and risk of bad outcomes for the ICU patients.

According to 78.46% (n=51) of the participants, superior-subordinate communication working relations have contributed to general poor communication skills. This has resulted in poor interpersonal relationships amongst the multidisciplinary team members, especially nurses and physicians in the ICUs. Sometimes physicians' poor communication skills lead to tension and frustrations in the unit, as one participant pointed out,

"There are some doctors who really do not have good communication skills for the work place, like some doctors just ask the nurse for something without even greeting him or her, and sometimes they behave as if they do not know you, that is not a good interpersonal working relationship."

"Some physicians just shout where they are not supposed to shout, they really disturb and confuse everyone in the unit," another participant commented.

Similarly, Rothschild, et al., (2005) & Stein-Parbury & Liaschenko (2007) found that there was increased anger, withdrawal and frustration observed amongst ICU multidisciplinary teams, especially between nurses and physicians due to failure to work together as a team.

However, Schmalenberg & Kramer, (2009) reported that specialised units, particularly critical care units demonstrated better unit nurse-physician relationships than nonspecialised medical-surgical units do. This was evidenced by an improved quality of interdisciplinary relationships.

Physicians' lack of good conflict resolution measures also lead to poor interpersonal relationships, as mentioned by another participant,

"Most of the doctors do not know how to resolve conflicts constructively. Often they rush through when there is a conflict or a problem. They do not want to take time, discuss, negotiate and come to a compromise. Whenever conflicts are not constructively resolved, good interpersonal relationships cannot be maintained amongst the colleagues."

A similar opinion was expressed by Beattie (1995) that conflict is a barrier to teamwork and Hendel (2007) pointed out that the conflict management options used by the physicians were not constructive. Whenever there was a conflict, physicians would rather opt for the lose-lose resolving approach in which there is no compromise and negotiation, instead of the win–win approach where there is negotiation and compromise between parties.

Because nurses perceived the physicians' superior attitude as a constraint to effective nurse-physician collaboration, they began to believe that they were inferior to the physicians and struggled to collaborate professionally with them. Most of the nurse

participants considered that this affects the care being given to the patients because many of the nurses become frustrated and do not enjoy their job.

4.3.3.2 Nurses' inferiority complex (accepting subordinate role)

Seventy four percent (n=48) of the nurse participants mentioned that once the physicians behave as if they are better and consider that they occupy higher status than the nurses; most of the nurses feel inferior and undermined. As a result, most of the nurses are wary of the physicians and do not question them. One participant explained,

"Most of the nurses have inferiority complex as a result they do not have courage to consult or question the doctors when there is a need to do so."

The nurses stated that most of them do not participate in discussions about patients' care ; do not join the doctors for ward rounds and do not contribute their ideas, suggestions or opinions pertaining to patient care, as another participant pointed out,

"Physicians are very debilitating to the nursing profession; they do not encourage nurses' input especially during ward rounds and do not take note of what nurses are suggesting."

These findings concur with what was indicated by Chaboyer & Patterson (2001) that collaborative relationships cannot develop if individual members do not value and respect each others' contributions and competencies.

Forty eight percent (n=31) of the participants indicated that they generally withdraw or pull out and do not get involved in decision making. They feel discouraged because their inputs are not appreciated during the discussions, as indicated by one participant,

"Collaboration does not work because nurses are not appreciated whenever they do something good, as a result nurses feel it is better to keep quiet and not get involved."

"Even when a nurse has experience she is undermined by junior doctors, therefore one is not even respected for being more experienced. It is better not to share your knowledge because it will not benefit those who are less experienced," another participant complained.

Similar findings were identified by Coombs & Ersser (2004) who found that medicine (physicians) dominated decision making while nursing remained unappreciated and undervalued; and that the link between team decision making and effective interprofessional working in the ICUs hardly worked. However, nurses are called to participate in decision making as patients' advocates. The Synergy model indicates that one of the nurses' characteristic required in order to meet patients' needs is to be an advocacy or moral agent. This is where nurses work on patients' behalf and represent their concerns and help to resolve ethical issues within and outside the clinical setting. (Alspach, 2006).

However, 24.65% (n=16) of the participants felt that the inferiority complex is experienced within the nurses because of their own lack of interest to learn things and, as a consequence, they lack knowledge and skills. This contributes to lack of confidence and failure to be assertive where necessary. 24.65 (n=16) of the participants felt that lack of knowledge and interest also contribute to the deteriorating standards of care. As such, physicians increasingly found the basis for undermining the nurses since the nurses themselves prove to be neither responsible nor accountable and lack autonomy, as one participant pointed out:

"Imagine a nurse giving an answer like ***"I don't know,"*** *to the doctor when being asked for some explanation or clarification, that is not professional because it makes the doctor angry and he feels that such a nurse is not supposed to be in the unit or does not know what she is supposed to be doing in the unit."*

But Schmalenberg & Kramer, (2009) clearly pointed out that nurses' autonomous practice is essential for safe and quality care and for their job satisfaction. This is where nurses have the freedom to act in the best interest of patients, to make independent decisions in the nursing sphere of practice and interdependent decisions in those spheres where other disciplines overlap with nursing. And according to 'Nursing Act 33 of 2005, competency framework,' nurses are expected to demonstrate sound judgment, critical thinking and caring attitude as they provide health services to patients and clients.

Again, fourteen percent (n=9) of participants indicated that some nurses treat doctors as their superiors and play a subservient role, this makes the doctors treat the nurses as their inferiors, as one participant indicated,

"Some nurses treat and refer to the doctors as very important people instead of colleagues, and in that way doctors feel exalted and automatically they tend to look down upon the nurses."

4.3.3.3 Overlapping responsibilities

Seventy two percent (n=47) of participants perceived that effective collaboration was being affected by overlapping areas of responsibility between nurses and physicians and this was bringing role confusion because many physicians are not aware of the nurses' scope of practice, as one participant complained,

"Sometimes a senior physician shouts at a nurse for not implementing a particular intervention which was not necessarily meant to be done by the nurse but by a junior physician."

Similarly, Fewster-Thuente & Velsor-Friedrich (2008) pointed out that lack of role clarification was one of the barriers to effective collaboration in the ICUs. It was observed that health care providers met problems when it came to role distinction as to who had the responsibility for the patient as such care would be delayed and affected patient care outcome.

4.3.3.4 Workload

Heavy workload was found to be another contributing factor to the failure of successful nurse-physician collaboration in the ICUs. Fifty five percent (n=36) of the participants expressed the view that nurses are mostly overworked in the ICU because of staff shortages. As a result most of the nurses are stressed, frustrated, experiencing burnout and not motivated. This also affects the standard of care as well as patient care outcome thereby provoking doctors' reactions of undermining the nurses since most of the doctors might not understand what nurses are going through.

"Nurses in the ICUs are going through a lot of stress related to the working conditions because of overworking, so we find it difficult at times to properly collaborate with the physicians," one participant commented.

In the study conducted by Berland, Natvig & Gundersen (2007), findings showed that the demanding work environment together with minimal control and social support from colleagues results in increased stress that can often have an effect on patient safety. Similar results were found by Li & Lambert (2008) who observed that the most frequently cited workplace stressor was workload.

Regardless of all the above mentioned perceived constraints, the majority of the participants in the study maintained that effective nurse-physician collaboration in the ICUs could be established and maintained if given practical recommendations to be followed by the team members.

4.3.4 Nurses' Recommended Measures

The majority of the participants 93.84% (n=61) suggested promoting team-work as the main recommendation to create a working relationship whereby physicians and nurses would regard each other as colleagues rather than the perceived superior-subordinate working relationship. In this way, effective nurse-physician collaboration would be enhanced in the ICUs. Most of the participants suggested that the spirit of working as a team could be achieved through the following measures: practising professional communication skills; developing good interpersonal relationships, and stipulating clear role clarification. A focus on patient-centered care, and providing staff motivation strategies were other recommended measures, which the nurse participants perceive could enhance effective nurse-physician collaboration.

4.3.4.1 Communication skills

Sixty one (93.84%) of the participants who gave written responses recommended open and clear communication between nurses and physicians. The need for clarity in both verbal and written communication was suggested by most of participants. Nurses recommended that physicians should speak loudly and clearly and not mumble to their immediate circle of medical colleagues during ward rounds, as one nurse participant pointed out,

"Doctors should speak loud enough during ward rounds so that everyone is able to hear what is being said and also be able to follow the discussion."

A similar recommendation was made by Faith & Chidwick (2009), who suggested that interdisciplinary team members should be encouraged to maintain timely, open, and consistent communication with emphasis placed on building trust and maintaining equality and respect for the views of all involved parties.

Nurses also requested that there should be proper hand over to facilitate continuity of care, for example,

"In cases where the doctor has reviewed a patient and it happens that a nurse was busy and did not accompany him, the doctor should be able to give the handover to that responsible nurse or even to the shift leader so that whatever orders have been made are done accordingly."

As indicated by Manojlovich, Antonakos & Ronis (2009), as nurses access more information, support, resources and opportunities; they become more effective in their roles a situation that helps improve outcomes.

Twenty nine percent (n=19) of the nurses also recommended that physicians should write the orders clearly so as to avoid errors, as the other nurse pleaded,

"Physicians should try to write the orders clearly because sometimes nurses find it difficult to read the physicians' handwriting and especially if it is a medication prescription, mistakes are made by giving the patient an overdose or under dose which is not safe for the patient."

A similar recommendation on communication was made by McKeon, et al., (2006), who suggested that team members need to possess both clinical expertise and other important non technical team skills such as communication, cooperation, acceptance of suggestions or criticism, giving of suggestions and criticism as well as coordination.

4.3.4.2 Interpersonal relationship

Lively and interactive interpersonal relationships amongst team members was suggested by most of the participants as one of the recommended measures to enhance nurse-physician collaboration in the ICUs. According to 67.69% (n=44) of the participants, a good interpersonal relationship includes mutual respect amongst team members irrespective of gender, social status, race or cultural diversity, as one participant reiterated;

"*Both nurses and doctors should bury their social, gender, racial and cultural differences when working as a team in the ICU and most of all, respect each other."*

Fifty five percent (n=36) of the participants indicated that interpersonal relationships could also be achieved by practising constructive conflict resolution skills and problem solving skills in the units. Fifty five percent (n=36) of the participants recommended that whenever conflicts arise, they should be dealt with immediately through professional negotiation and compromise so that no personal enmities are created. Similarly, any problems concerning patient care delivery should be solved though meetings, involving both nurses and physicians so as to come up with solutions together. One participant commented,

"These physicians normally do not want to sit down, take their time and discuss whenever there are pressing issues in the unit, to them it is like a waste of time but they do not realise that you can not work well with someone whose concerns have not yet been dealt with."

It has been noted by Schmalenberg & Kramer (2009) that improved nurse-physician relationships would also improve the quality of patient care through participating in interdisciplinary collaborative patient rounds, resolving conflicts constructively, performing competently and demonstrating self confidence.

4.3.4.3 Role clarification

Seventy two percent (n=47) of the participants who gave written responses believed that role clarification is one of the most vital aspects in the success of teamwork relationships.

For example, 47 participants suggested that physicians should know the nurses' scope of practice so as to value their role. Twenty two participants felt that sometimes nurses are blamed unnecessarily by physicians just because there is role confusion. For example, one participant recommended,

"*The nurses' role should be well stipulated so that physicians are able to appreciate the nurses' role. In that way physicians would be able to consult the nurses where necessary, involve them, and respect the views, opinions and suggestions contributed by the nurses during patient care discussions or ward rounds."*

It was recommended by McKay & Crippen (2008) that multidisciplinary team members should know their specific roles in the team and their expected shared responsibilities within their common goals so as to effectively collaborate and attain optimum patient care outcome in the ICUs. Similar recommendations were made by Bailley (2006) who stated that educational strategies related to role expectations are necessary to facilitate the development of care delivery partnerships characterised by interdependent practice.

4.3.4.4 Coordinated patient centered care

Twenty nine percent (n=19) of the participants, who responded in writing, felt that patient-centered care could enhance nurse-physician collaboration. Patient-centered care also assists in maintaining standards of care. This is where there is cooperation amongst team members and well coordinated patient focused care activities, such as ward rounds

in the units. The nurses therefore, urged both parties to have empathy so as to achieve patient-centered care. This is noted throughout the whole of the patients' stay at all stages of the treatment regimen, from planning interventions to the preparation for discharge. Yildirim et al., (2005) stressed that patients are the heart of health care systems and as such all health professionals should serve them through improved collaboration to achieve better patient care. Similar attention to the importance of patient centered care was suggested by McCauley & Irwin (2006) through a patient-focused care project after realisation that medical care was too fragmented and too focused on issues that hindered communication of patients' needs.

The involvement of everyone during patient care planning would assist to achieve patient centered-care in the units. Almost 93.84% (n=61) of the nurses recommended that physicians should involve the nurses when setting patient care goals and welcome their input. This could enhance the maintenance of standards of care since team members would follow the standard protocols together.

4.3.4.5 Staff Motivation

Seventy four percent (n=44) of the nurses felt that motivation is another solution to the success of nurse-physician collaboration in the ICUs. The nurses suggested that motivation can be achieved through promotion of good working relations, as indicated already, as well as knowledge empowerment and providing stress-reducing measures, which can be organised by hospital management.

- Knowledge empowerment

According to most of the nurses, knowledge can be gained through encouraging and supporting nurses for further studies. In-service training on current ICU issues, orientation to protocols and meetings with physicians or regular educational meetings held within the nursing team and joining journal clubs are some of the means to gain more knowledge and skills to maintain standards of care. The nurses felt that knowledge empowerment is one way of encouraging them to become more responsible and accountable towards the care they provide to critically ill patients. Most of nurse participants felt that with adequate knowledge they can become confident, assertive and autonomous. A similar recommendation was made by Bashir (2005) that there should be an increase in level of training, development and skills in order to meet the self esteem needs of staff also provide a favourable work environment, which motivate the staff.

- Stress Reduction Measures

In addition, 44 participants recommended provision of different forms of recognition, incentives, outings and stress management workshops as measures to reduce stress. Dealing with stress and frustrations amongst the nurses would assist in reducing the rate of staff resignation thereby decreasing workload. One participant gave an example,

"As nurses we are motivated by very simple things, just by being offered awards, refreshments, outings, being given overtime allowances, attending various workshops pertaining to our work and providing special attention and concern to any nurse who may be showing signs of work related stress."

Webster, Snowdon & Shaw (2008) also found that taking staff away on a trip improved the staff motivation, teamwork and the services provided to patients and their families. This was because the nursing staff was given an opportunity and empowerment to plan, implement and evaluate changes in the clinical practice.

4.4 SUMMARY

This chapter presented the quantitative results obtained from the study and discussed the descriptive and inferential statistics used to describe and analyse the data. The results have been presented in the form of descriptive tables, pie graphs and line graphs so as to enhance interpretation of the results. The narrative responses were grouped into meaningful categories. The following final chapter will present a summary of the study, the main findings, limitations, recommendations and conclusion.

CHAPTER 5

SUMMARY, MAIN FINDINGS, LIMITATIONS, RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

The concluding chapter presents a summary of the study; main findings which emerged as well as the limitations. The main findings will be described in relation to the study objectives. Finally, the recommendations for clinical nursing practice, nursing management, nursing education and areas for further research are also presented as well as the conclusion.

5.2 SUMMARY OF THE STUDY

The purpose of this study was to identify and describe nurses' perceptions and recommendations regarding nurse-physician collaboration in the Intensive Care Units in a public sector tertiary hospital in Johannesburg. Collaborative multidisciplinary practice is essential to improve patient care delivery, critically ill patients' outcome and staff satisfaction, yet effective collaboration does not happen naturally amongst team members. The sole purpose of collaboration is creating a healthy healing and safe environment for critically ill patients in the ICUs. Team members' communication skills, coordination and cooperation tend to matter in building such collegial working relationships.

The objectives for the study were:

- To identify and describe nurses' perceptions of nurse-physician collaboration in the Intensive Care Units;
- To elicit the constraints that influence effective nurse-physician collaboration in the Intensive Care Units;
- To identify suggested measures for enhancing effective nurse-physician collaboration in the Intensive Care Units.

5.3 MAIN FINDINGS

The first part of quantitative data were analysed by using STATA version 10 and were presented in tables and figures. The extent of agreement and disagreement responses to the factor items indicated the general nurses' attitude towards nurse-physician collaboration. Then nurses' perceptions were examined and compared in relation to the nurses' gender, experience and training status in order to find out if there were any significant similarities and differences in the perception. The second part containing the responses to the open ended questions were carefully grouped into meaningful categories.

5.3.1 Demographic Data

The demographic data showed that the majority of the nurse participants were female 86.67% and only 13.33% were male. The average age of the participants was 39.03. Eighty percent of the participants have worked in the Intensive and critical care settings for 10 years and less whereas 20.51% of the participants have worked in the ICUs for more than 11 years. Fifty percent of the

participants are registered Intensive and Critical Care Nurses while 48.53% are just general registered nurses.

5.3.2 Nurses' Perceptions

The findings of this study showed that nurses indicated a significant positive perception and attitude toward nurse-physician collaboration in the ICUs. This was evident by their 100% frequency score, significantly agreeing to the four priority items as follows: Item 2 stating that "Nurses are qualified to assess and respond to psychological aspects of patients," item 3 stating that, "During their education medical and nursing students should be involved in teamwork in order to understand their respective roles," item 4 stating that, "Nurses should be involved in making policy decisions affecting their working conditions," item 5 asserting that, "Nurses should be accountable to patients for the nursing care they provide" and item 12 which indicates that, "Nurses should also have responsibility for monitoring the effects of medical treatment."

On the other hand, there was a significant nurses' disagreement or rejection to items 8 and 10. Item 8 states that, "Physicians should be dominant authority in all health matters" The nurses' disagreement or rejection to this item indicates also the nurses' positive perception about nurse-physician collaboration. This item contributes to the failure of the establishment of effective nurse-physician collaboration in the ICUs. Nurses would not be free to be involved in patient care decisions if the physician's authority is dominant

And item 10 states that, "The primary function of the nurse is to carry out the physician's prescriptions." Carrying out of physicians' prescriptions is part of the nurses' responsibility since it is a dependent function of the nurse as long as the physicians are

aware of the nurses' scope of practice and do not abuse that role of the nurse. However, the study results showed that there was no significant association between male and female perception towards collaboration.

Years of working experience in the ICU were examined in order to find out if more or less years of experience has any significant impact on how ICU nurses perceive nurse-physician collaboration. The study results showed that there was a significant similarity in the nurses' perception to collaboration. Both categories of the nurses with more or less years of experience in ICU, feel that there are many overlapping areas of responsibility between nurses and physicians as item 6 on the scale states. Item 6 was also significantly agreed to by both registered intensive critical care nurses and none ICU registered ones. Overlapping of areas of responsibility can create role confusion and becomes a constraint to the development and maintenance of effective collaboration amongst team members. Patient care delivery can be affected since some of interventions can be left undone.

The study findings also indicated that there was a positive significant nurses' perception concerning item 14, which states that, "Physicians should be educated to establish collaborative relationships with nurses." Both groups of nurses with more and less ICU work experience feel that unless physicians are oriented to the need for collaboration, the establishment of effective nurse-physician collaboration cannot be effected.

5.3.3 Nurses' Perceived Constraints to Nurse-Physician Collaboration

- **Physicians' superiority attitude and the nurses' reactions**

The nurses' written responses showed that most physicians display a superiority attitude towards the nurses in their working relationship in the ICUs. The nurse participants indicated that this has resulted in failure of the multidisciplinary team members to work as colleagues and a prevailing general superior- subordinate communication working relationship. Therefore because of this superiority attitude, often physicians undermine nurses, do not trust them, do not even consult the nurses; mostly nurses are not respected; nurses' views, opinions and suggestions are not taken seriously; most of the time nurses are not involved in the patients' care planning and are not involved in decision making activities. Collaborative relationships cannot develop if individual members do not value and respect each others' contributions and competencies (Chaboyer & Patterson 2001).

According to the participants, superior-subordinate communication working relations have contributed to fractured communication, poor conflict resolution measures resulting into poor interpersonal relationships amongst the multidisciplinary team members, especially nurses and physicians in the ICUs.

The nurse participants mentioned that once the physicians behave that they are better and occupy a higher status than the nurses; most of the nurses felt inferior and undermined and others accept that subordinate role. As a result, most of the nurses become afraid of the physicians and cannot question them nor participate in patient care discussions either do they do not join them during ward rounds. Such nurses are also not able to contribute

their ideas, suggestions or opinions pertaining to patient care. The participants indicated that they generally withdraw or pull out and do not get involved in decision making.

However, some of the participants felt that inferiority complex is experienced among nurses because of their own lack of interest to learn things; hence they lack knowledge and skills. This contributes to lack of confidence and failure to be assertive where necessary. Most of the participants felt that lack of knowledge and interest also contribute to the deteriorating standards of care. As such, physicians increasingly find the basis for undermining the nurses since the nurses themselves proved to be neither knowledgeable nor trustworthy.

- **Workload**

Heavy workload was found to be another contributing factor to the failure of successful nurse-physician collaboration in the ICUs. Most participants expressed that nurses are mostly overworking in the ICU and this is because of staff shortage. As a result, most of the nurses are stressed, frustrated, burnt out and not motivated. This also affects the standard of care as well as patient care outcome thereby provoking doctors' reactions of undermining the nurses since most of the doctors might not understand what nurses are going through.

- **Role confusion**

Role confusion amongst team members was another constraint which was perceived by the majority of the nurses. Nurses in the ICUs perceive that health care providers meet problems when it comes to role distinction, especially as to who has the responsibility for the patient. Hence, care is delayed at times thus affecting patient care delivery and outcome.

5.3.4 Nurses' Recommendations

Majority of the participants suggested that the promotion of teamwork could lead to better working relationship whereby physicians and nurses would regard each other as colleagues rather than the perceived superior-subordinate working relationship. In that way effective nurse-physician collaboration would be enhanced in the ICUs. Most of the participants suggested that teamwork could be achieved though the following measures: establishing interpersonal relationships; having clear role clarification; and practising professional communication skills. A focus on patient-centered care and staff motivation were other recommendations.

- **Interpersonal relationship and skilled communication**

Interactive interpersonal relationships amongst team members were suggested by most of the participants as the recommended measures to enhance nurse-physician collaboration in the ICUs. According to most of the participants, good interpersonal relationship

includes mutual respect amongst team members irrespective of gender, social status, race or culture.

- **Role clarification**

The nurse participants believed that role clarification is one of the most vital aspects for the success of team working relationship. For example, most of the participants suggested that physicians should know the nurses' scope of practice in order to value the nurses' role. Participants felt role clarification would assist physicians in not blaming nurses unnecessarily.

- **Coordinated patient-centered care**

Most participants felt that patient-centered care could enhance nurse-physician collaboration in the units, where there is cooperation amongst team members and well coordinated patient focused care activities. Similar importance was suggested by McCauley (2006) through a patient-focused care project after realisation that medical care was too fragmented and too focused on issues that hindered communication of patients' needs.

- **Staff Motivation**

The majority of the nurses felt that motivation is another solution for the success of nurse-physician collaboration in the ICUs. The nurses suggested that motivation can be achieved through knowledge empowerment and providing stress reducing measures. According to most of the nurses, knowledge can be gained through encouraging and sponsoring nurses for further studies. In-service training on current ICU issues, orientation to protocols and meetings with physicians or experience sharing amongst nurses are some of the means to gain more knowledge and skills. The nurses felt that knowledge empowerment is one way of making them become more responsible and effective towards the care they provide to the critically ill patients. In addition, nurses feel that with adequate knowledge they can become confident and assertive as well as autonomous. However, most of the nurses felt that both nurses and physicians need better orientation to the concept of effective collaboration. They suggested measures to reduce stress included different forms of recognition, incentives, outings and stress management workshops.

5.4 LIMITATIONS OF THE STUDY

The following limitations were faced:

- The examination of perceptions of nurse-physician collaboration by looking at nurses only without comparing same with physicians' opinions;
- The use of non-probability convenience sampling and a relatively small sample
- The small representation of male nurses in the sample;

- The use of level three intensive care units at only one tertiary public sector hospital.

In consideration of these limitations, the findings of this study cannot be generalised unless the study is carried out on a larger scale including other level three tertiary hospitals.

5.5 RECOMMENDATIONS OF THE STUDY

Based on findings of this study, the following recommendations are suggested:

5.5.1 Nursing Practice

- In order to achieve effective collaboration between nurses and physicians and even with other allied health care providers in the intensive care units, there must be teamwork. This can be enhanced through good communication and interpersonal skills, respect for each other, recognition of each discipline's scope of practice, role distinction and treating each other as colleagues.

- Nurses spend 24 hours each day with the critically ill patient. Nurses automatically become coordinators of collaboration in the intensive care units. Therefore, nurses must be equipped with professional communication skills, have a positive attitude towards collaboration with the physicians; should be equipped with up-to-date information and clinical skills concerning critical care management; practice holistic approach to patient care, be confident, assertive and advocate for patients always.

5.5.2 Nursing Management

- It was observed in this study that there are many overlapping areas of responsibility in the intensive care units. Therefore, management should often orient nurses on their independent, dependent and interdependent functions so that nurses are knowledgeable enough of what is expected of them and that they are not treated as subordinates to physicians. So, clear role distinctions must be well specified in the units.

- Management should pay particular attention to how collaboration practices are being carried out in the critical care settings because the maximum outcome of patient care in these areas is dependent on a multidisciplinary approach to patient care delivery. Whenever collaboration is failing, there must be orientation to collaboration principles, especially between nurses and physicians so that power differential factors are properly tackled.

- Management should involve both nurses and physicians to come up with the best collaborative practice measures in the units.

5.5.3 Nursing Education

- Nurse educators should emphasise to nursing students during their training the importance of being confident in performing nurses' independent functions and to focus on holistic approach when planning patient care.

- The nursing education programs should also emphasize the need for involvement in teamwork.

5.5.4 Nursing Research

The results of this study have shown that nurses have a positive attitude towards nurse-physician collaboration, but there is need to conduct a survey in order to identify and compare nurses' and physicians' perceptions and opinions regarding their collaboration in the intensive care units.

5.6 CONCLUSION

The researcher conducted this study with the aim of identifying and describing the nurses' perceptions, constraints and recommendations regarding nurse-physician collaboration in the ICUs at a public sector tertiary hospital in Johannesburg. The results revealed low levels of professional, friendly, lively and enjoyable working relations affecting the collaboration of the multidisciplinary team members in the intensive care units, especially between nurses and physicians. For any team to effectively succeed in collaboration there must be a realisation and acceptance of each team member's role and contribution. Teamwork requires a collectivist approach involving collective action and shared responsibility. In every team there are a specified number of team members and each one plays his/her own role and in the end it is the team that wins as a single unit. The intensive care unit nurses, physicians and other allied health care providers make one team regardless of their different roles towards patient care. Collaborative working relationships can succeed when team members treat each other as colleagues, regardless of factors which bring about power differential.

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APPENDIX A

A Jefferson Scale of attitudes toward Nurse-Physician Collaboration

INSTRUCTIONS: Please indicate the extent of your agreement or disagreement of the following statements by circling the appropriate number. For the purpose of this survey, a nurse is defined as "either staff or registered nurse currently working in Intensive Care Units Namely: Trauma, Cardiothoracic and Main ICUs."

CODE NO._____

Gender: [1] Male Age [in years]: _____

[2] Female Years Worked in ICU: [1] 10 years or less.

[2] 11 years or more

Registered Intensive and Critical Care Nursing: [1] Yes.

[2] No.

	Items	Strongly Agree	Agree	Disagree	Strongly Disagree
1	A nurse should be viewed as a collaborator and colleague with a physician rather than his/her assistant	4	3	2	1
2	Nurses are qualified to assess and respond to psychological aspects of patients'	4	3	2	1
3	During their education, medical and nursing students should be involved in teamwork in order to understand their respective roles	4	3	2	1
4	Nurses should be involved in making policy decisions affecting their working conditions	4	3	2	1
5	Nurses should be accountable to patients for the nursing care they provide	4	3	2	1
6	There are many overlapping areas of responsibility between nurses and physicians	4	3	2	1
7	Nurses have special expertise in patient education and psychological counselling	4	3	2	1
8	Physicians should be the dominant	4	3	2	1

	Items	Strongly Agree	Agree	Disagree	Strongly Disagree
	authority in all health matters				
9	Nurses and physicians should contribute to decisions regarding patient discharge from the ICU	4	3	2	1
10	The primary function of the nurse is to carry out the physician's orders	4	3	2	1
11	Nurses should be involved in making policy decisions regarding the hospital support services upon which their work depends	4	3	2	1
12	Nurses should also have responsibility for monitoring the effects of medical treatment	4	3	2	1
13	Nurses should clarify a physician's order when they feel that it might have the potential for detrimental effects on the patient	4	3	2	1
14	Physicians should be educated to establish collaborative relationships with nurses	4	3	2	1
15	Interprofessional relationships between nurses and physicians should be included in their educational programs	4	3	2	1

16. What do you think are constraints that affect effective collaboration in ICUs?

17. What would be the measures you would recommend in order to enhance effective collaboration in the ICUs?

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APPENDIX B

Faculty of Health Sciences
Medical School, 7 York Road, Parktown, 2193
Fax: (011) 717-2119
Tel: (011) 717-2745

Reference: Ms Tania Van Leeve
E-mail: tania.vanleeve@wits.ac.za
09 February 2009
Person No: 317254
PAG

Mrs F Bodole
P O Box 80147
Blantyre
Malawi

Dear Mrs Bodole

Master of Science in Nursing: Approval of Title

We have pleasure in advising that your proposal entitled "*"Nurses" perceptions of Nurse Physician collaboration in the intensive care units at a public sector hospital in Johannesburg*" has been approved. Please note that any amendments to this title have to be endorsed by the Faculty's higher degrees committee and formally approved.

Yours sincerely

Mrs Sandra Benn
Faculty Registrar
Faculty of Health Sciences

APPENDIX C

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
R14/49 Bodole

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER M081012**
PROJECT	Nurses' Perception of Nurse-Physician Collaboration in the Intensive Care Units at a public Sector Hospital in Johannesburg
INVESTIGATORS	Mrs F Bodole
DEPARTMENT	Dept of Nursing Education
DATE CONSIDERED	08.10.31
DECISION OF THE COMMITTEE*	Approved unconditionally

Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.

DATE 09.12.02 **CHAIRPERSON** .....
(Professor P E Cleaton Jones)

*Guidelines for written 'informed consent' attached where applicable

cc: Supervisor : Dr G Langley

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University.
I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to a completion of a yearly progress report.**

APPENDIX D

Gauteng Department of Health

Office of the CEO
Enquiries: M. Motjelele
(011): 488-3792 / 3
(011) 488-3753

05th February 2009

Mrs F Bodole
Department of Nursing Education
Wits

Dear Mrs Bodole

RE: Permission to Conduct a Study re: "Nurses' Perceptions of Nurse-Physician collaboration in the Intensive Care Units" at Charlotte Maxeke Johannesburg Academic Hospital.

Permission is granted for you to conduct the above research as indicated in your request provided:

1. The Charlotte Maxeke Johannesburg Academic hospital will not in anyway incur or inherit costs as a result of the said study.
2. Your study shall not disrupt services at the study sites.
3. Strict confidentiality shall be observed at all times.
4. Informed consent shall be solicited from patients participating in your study.

Please liaise with the Head of Department and Unit Manager or Sister in Charge to agree on the dates and time that would suit all parties.

Kindly forward this office with the results of your study on completion of the research.

Yours sincerely

Dr. S. B. Mfenyana
Acting Chief Executive Officer

APPENDIX E

Nurse' Perceptions towards Nurse-Physician Collaboration in the Intensive Care Units of a Public Sector Hospital in Johannesburg

NURSING STAFF INFORMATION LETTER

My name is Feggie Bodole and I am currently registered as a postgraduate student for Master of Science in Nursing (Intensive Care Nursing) at the University of the Witwatersrand, in the Department of Nursing Education. I hope to conduct a research project at Johannesburg Hospital as one of the requirements of the course. The topic of the study is **"Nurses' perceptions towards nurse-physician collaboration in the intensive care units**." I would like to invite you to participate in this project.

Nurses and physicians form a very important part of the multidisciplinary team when they are working in the intensive care units. A review of literature has shown that, when nurses and physicians effectively collaborate and communicate, it enhances the meeting of the needs of the critically ill patients in the intensive care units which also gives job satisfaction to the nurses.

Unfortunately, nurse- physician collaborative culture in the intensive care units has been an unworkable system due to a number of factors. This affects the care to the critically ill patients because a lot more errors happen and patients' safety is at risk. Therefore the purpose of this study is to identify and describe nurses' perceptions towards nurse-physician collaboration in the intensive care units.

Should you agree to participate, you will be asked to sign a consent form and complete a questionnaire. Participation is voluntary, you may wish to choose to participate or withdraw from the study at any time. Completing of the questionnaire may take approximately 30 minutes. Code numbers will be used instead of personal names for anonymity and the information given will be treated with confidentiality. Neither will your personal particulars be reported in the study to ensure your identification is protected.

Although this study may not benefit you directly, it will provide information that might enable nurses to establish and sustain professional relationships with colleagues and members of the interdisciplinary team in the critical care setting.

The appropriate people and research committees of the University of the Witwatersrand, Gauteng Department of Health and Johannesburg Hospital will have approved its procedures.

Thank you for taking the time to read this information letter. Should you need any further information regarding this study, you are free to contact me on the following telephone number: **0844934434.**

APPENDIX F

Nurses Perceptions towards Nurse-Physician Collaboration in the Intensive Care Units of a Public Sector Hospital in Johannesburg

NURSING STAFF CONSENT FORM

I…… (position)…… …….

give permission to participate in the study.

I have read and understood the content of the information letter and I have been given the opportunity to ask any questions, where I feel necessary about the study and its procedures.

I may at any stage, without prejudice, withdraw my consent and participation in the study.

PARTICIPANT

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Signature Date & Time

Dear Feggie:
Dr. Callahan referred your request to me. In response to your request, I am sending you a copy of the Jefferson Scale of Attitudes toward Physician-Nurse Collaboration, the scoring instructions, and a few relevant articles. You have our permission to use the scale in your not-for-profit research given that the Jefferson copyright sign will appear at the bottom of any copy that you will be using in your project.
I wish you good luck with your project and please inform us of your progress,
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